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ABSTRACT

This compilation lists research completed in the areas of health, physical education, recreation, and allied areas during 1975. It is arranged in three parts: (1) Index; (2) Bibliography; and (3) Theses Abstracts. In the first section, cross references are given for all of the listings in Parts II and III. References are arranged under subject headings in alphabetical order. The second section is a listing of published research, citing articles published in the 168 periodicals reviewed. A listing of these periodicals is appended. The third section provides abstracts of master's and doctor's theses from graduate programs in health, physical education, recreation, and allied areas. Names of institutional representatives as well as the major professors are included in each citation. A list of the contributing institutions is also appended. (MM)

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COMPLETED RESEARCH

in Health, Physical Education, and Recreation

including international sources

Volume 18 1976 Edition

covering research completed in 1975

Edited by **JERRY R. THOMAS** and **RAYMOND A. WEISS**
for the RESEARCH COUNCIL of the AMERICAN ALLIANCE
FOR HEALTH, PHYSICAL EDUCATION, AND RECREATION

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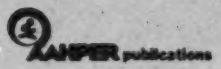

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INTRODUCTION

This compilation lists research completed in the areas of health, physical education, recreation, and allied areas during 1975. It is arranged in three parts.

I. **Index.** In this section, cross references are given for all the listing in Parts II and III. References are arranged under the subject headings, which are in alphabetical order. Instructions for using the index are given at the top of page 1.

II. **Bibliography.** This is a listing of published research, citing articles published in the 168 periodicals reviewed by the Committee for *Completed Research*. The periodicals reviewed are listed in pages 229 through 231.

III. **Theses Abstracts.** These are master's and doctor's theses from institutions offering graduate programs in health, physical education, recreation, and allied areas. Institutions reporting are listed on pages 232 through 235. Most references are accompanied by abstracts of the research and all are numbered in alphabetical order according to the institution. Names of institutional representatives sending in these abstracts are indicated in parentheses after the name of the institution, major professors are in parentheses after each reference.

Universities and colleges are encouraged to submit abstracts of theses completed at their institutions in the year 1976 for inclusion in the next issue of *Completed Research*. Material should be sent to Jerry R. Thomas, Chairman for Theses Abstracts.

Jerry R. Thomas
Florida State University
Raymond A. Weiss
New York University
Co-Chairmen
Committee on Completed Research

PART I—INDEX

This index enables the reader to refer to the items of completed research listed in Parts II and III. Research topics are arranged in alphabetical order. The reference numbers following each topic correspond to the listings of completed research dealing with that topic. The capital letter B indicates a reference to be found in the Bibliography (Part II); the capital letter T indicates a reference to be found in the Theses Abstracts (Part III).

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PART III—THESES ABSTRACTS

ABBREVIATIONS APPEARING IN THIS PUBLICATION:

AAHPER = American Alliance for Health, Physical Education, and Recreation (abbreviate all familiar organizations, e.g., AAU, NCAA, etc.)
ANCOVA = Analysis of covariance
ANOVA = Analysis of variance
BTPS = Body temp pressure saturated
C = centigrade
CA = chronological age
CO_2 = carbon dioxide
χ^2 = chi square
° = degrees
ELE = elementary
EKG = electrocardiogram
EMG = electromyogram
EMR = educable mentally retarded
exp. = experiment or experimental
F = farenheit
F = *F* ratio
FEV = (1.0 or 2.0) forced expiratory volume
gm = gram
GPA = grade point average
HE = health, health education
ht = height
HR = heart rate
IQ = intelligence quotient
JHS(S) = junior high school(s)
kg = kilogram
kg/m = kilogram per meter
kpm/min = kilopondmeter per minute
KR = knowledge of results
max = maximum, maximal
measurement, units of*
mm = milimeter
mph = miles per hour
msec = millisecond(s)
MT = movement time
no. = number (in text e.g., the total no. of days. . .)
N = number (e.g., of subjects) all numbers in arabic form
N_2 = nitrogen
O_2 = oxygen
p = probability ($p < .05$ = significance greater than .05 level, $p > .01$ = nonsignificance at the .01 level)
PE = physical education
PR = pulse rate
PWC_{170} = physical work capacity
% = percent

psi = pounds per square inch
r = correlation
REC = recreation
RLV = residual lung volume
rpm = revolutions/min
RT = reaction time
SV = stroke volume
SD = standard deviation
SHS(S) = senior high school(s)
STPD = standard temp. pressure dry
Ss = subject(s); *S*'s = subjects' (possessive; fresh., soph., jr., sr.)
t = *t* ratio
tests**
temp. = temperature
U.S. = United States
USSR = Union of Soviet Socialist Republic
wt = weight
$\dot{V}O_2$ = oxygen uptake
$\dot{V}_E$ = ventilation equivalent
$\bar{X}$ = mean
V_T = tidal volume

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*in. = inch; sec = second, wk = week, hr = hour, etc.

**Abbreviate all kinds of performance tests if possible (e.g., CPI = California Psychological Inventory, Cattell 16 PF = Cattell 16 Personality Factory Inventory, MMPI = Minnesota Multiphasic Personality Inventory).

ABSTRACTS

AUBURN UNIVERSITY, AUBURN, ALABAMA (G. DENNIS WILSON)

1. BRUMBACK, Janet L. Comparison of two treadmill protocols for measuring oxygen consumption. M.S. in Physical Education, 1974. 49 p. (D. Wilson)

Two of the most extensively used exercise tolerance tests, the Balke treadmill test and the Bruce treadmill test, were compared using 8 active college women. The purpose was to determine if the 2 tests were equally satisfactory measures of aerobic capacity and if their HR and $\dot{V}I$ values were similar at corresponding $\dot{V}O_2$ values. Ss walked twice on a motor-driven treadmill participating in the Balke Standard and the Bruce treadmill tests. During each test, HR and $\dot{V}I$ were continuously monitored and recorded. Max HR, $\dot{V}I$, and $\dot{V}O_2$ values of the 2 exercise tests were t-tested, and in all cases, there were no significant differences ($p > .05$). Regression formulas revealed no significant difference in the HR and $\dot{V}I$ values educed at corresponding $\dot{V}O_2$ values. The aerobic capacity of women can be evaluated equally well on either the Balke Standard or the Bruce test.

BOSTON UNIVERSITY, BOSTON MASSACHUSETTS (LEONARD ZAICHKOWSKY)

2. D'AMICO, Virginia. The predictability of non-verbal cues. Ed.M., 1975, 38 p. (J. Cheffers)

3. BROWN, Ronald Haywood. Class, race, and athletics: A study of adolescent aspiration, intention, and interests. Ed.D., 1974, 139 p. (J. Cheffers)

4. KEILTY, Gerald C. The effect of instruction and supervision on interaction analysis on the preparation of student teachers. Ed.D., 1975, 236 p. (J. Cheffers)

5. MC CARTHY, Laura Weise. A proposal for the development of an international health center. Ed.D., 1975, 148 p. (A. Miller)

6. MAGOON, Emily J. The effect of music on the performance of beginner and advanced female players in selected sports skills. Ed.D., 1975. 86 p. (J. Cheffers)

BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH (DONALD D. SHAW)

7. ANDRESEN, Stephen W. The effect of tow rope training on high school quarter milers. M.S. in Physical Education, 1975. 31 p. (G. Fisher)

The effects of tow rope training and regular track training were compared as they related to $\dot{M}VO_2$, strides/¼ mi, and ¼ mi times of HS quarter milers. Ss (N=12) were randomly assigned to 2 groups. One group incorporated tow training into their regular track program in place of their interval workouts 2 to 3 times/wk. The other group trained under their regular track program as set up by their coach. Each S was tested at the beginning and end of a 6-wk period, and the results statistically analyzed. Results indicated no significant difference (.05 level) between the groups in any of the 3 parameters tested.

8. AUSBROOKS, Erskine Pond III. An evaluation of change in the health related attitudes of students completing Personal Health 130 instruction at Brigham Young University. M.S. in Health Science, 1975. 83 p. (O. R. Burgener)

A determination was made of the influence of personal health instruction on health related attitudes. Attitude response was also examined for significant differences between males and females. Data were obtained via pre- and post-testing using an attitude scale developed by Olsen. Test data were collected from an exp. group consisting of 3 personal health classes and a control group consisgint of a beginning bowling class, both of which were conducted on the Brigham Young University campus. ANOVA revealed that 3 attitude areas (sex education, divorce, and nutrition) showed significant ($p < .05$) attitude change from pre- to post-testing. Pre- and post-test attitude toward nutrition changed from a preferred attitude standing at pre-test to a significantly more preferred attitude standing at post-test for group 3 of the exp. students. Significant negative attitude change was indicated for divorce and sex education. Two attitude areas (divorce and self-medication) possessed significant difference between male and female response. Females in both areas indicated more preferred health attitudes than males indicated possessing.

9. BAKER, Robert L. The effect of the physical education program "Fitness for Life" on body composition and cardiovascular endurance of college students. Ed.D. in Physical Education, 1975. 73 p. (P. E. Allsen)

The effectiveness of the "Fitness for Life" program was determined as it realted to cardiovascular fitness and body composition. Ss were selected from the "Fitness for Life" classes offered Winter Semester, 1975, at Brigham Young University, and were assigned randomly to either exp. (N=41) or control (N=34) groups. It was found that: the exp. group had a higher overall $\dot{M}VO_2$/kg of body wt ($p < .05$) and a greater amount of improvement in both the SST and the 1.5-mi run; there was no difference between groups for either % body fat as determined by selected skinfolds or lean body mass; and the exp. group showed less gain in % body fat as measured by hydrostatic weighing. Participation in the "Fitness for Life" program contributed to the development of cardiovascular endurance and the control of wt gain for both men and women.

10. BROWN, Charles D. A comparison of results of serving into different receiving positions in volleyball. M.S. in Physical Education, 1975. 46 p. (B. Bangerter)

Results of serving into different receiving positions in volleyball were compared. Games were observed and charted. The receiving court was divided into positions and sections so that analysis could be used to determine which position and sections have the highest and lowest passing average. It was found that there was no significant relationship (.05 level) between the receiving position into which the volleyball was served and the success of the receiving team. There was a significant relationship (.01 level) between the receiving sections and the success of the receiving team.

11. BUNCH, Thomas Grant. A roentgenographic survey to determine the incidence of residual medical epicondylar apophyseal avulsion. Ed.D. in Physical Education, 1975. 69 p. (R. S. Francis)

The effect of participation in organized baseball on residual medial epicondylar apophyseal avulsion and fragmentation (Little League elbow) was assessed among male college students who had a history of participation in an organized baseball program during the ages of 8 to 14. Male students (N=398) were randomly selected from the following groups: organized baseball experience, no organized baseball experience, and the Brigham Young University baseball team members with previous organized baseball experience. No differences (.05 level) were found among the above 3 groups. Also, there were no differences (.05 level) of practical importance found by position,

geographic location and yrs. played. Organized baseball experience during the yrs. 8 to 14 has no effect on the amount of residual elbow injury.

12. CATHERALL, Thomas S. Simulation games and their effect upon selected educational attitude changes. M.A. in Recreation Education, 1975. 71 p. (C. T. Thorstenson)

The value of simulation games as an educational tool was tested by measuring selected educational attitude changes and agreement to the Nine Hunches as proposed by Western Behavioral Science Institute. Pre- and post-tests were administered to pairs of identical classes; 1 class playing simulations and the other not as a part of their regular curriculum. Results of the pre- and post-tests, when students simulating were compared to non-simulating students, indicated no significant change ($p > .05$) in selected educational attitudes. There was significant agreement to statement 3 of the Nine Hunches, and significant disagreement to statement 8 in one particular class but not in the others.

13. COLEMAN, James Eugene. A statistical evaluation of selected volleyball techniques at the 1974 World's Volleyball Championships. Ed.D. in Physical Education, 1975. 111 p. (C. McGown)

A statistical evaluation was made of selected variables in the final round of the 1974 World's Volleyball Championships for Men. Techniques studied were the serve, serve reception, set, attack, block and backcourt defense. The top 6 teams in the world played a 3 of 5 game match round robin. There were 15 matches with a total of 60 games. Modifications of the statistical systems developed for lower levels of play for the serve, serve reception, set, and attack were necessary. New systems were developed for blocking and backcourt defense. Conclusions included: performance levels for the top teams are known and related to team success; serve reception and blocking are most highly correlated (.05 level) to tournament finish; and attacking and blocking are most highly correlated to point spread in a game. Serving, serve receiving, and attacking are the easiest statistics to keep and are quite meaningful. Serve reception ranges for various levels of play are suggested.

14. COWMEADOW, Marjorie Kay. A comparison of two aerobic training programs with personality as a predictor. Ed.D. in Physical Education, 1975. 199 p., (D. Shaw)

Unconditioned university women ($N=72$) participated in a 10 wk jogging program. Ss ($N=26$) were assigned to each training program, and 20 to a control group. Miller's treadmill test was used to establish pre and post $\dot{V}O_2$. The CSPFQ was used as a predictor. Fisher's Aerobic Program showed greater gain in

$M\dot{V}O_2$ (7.823 ml/kg/min vs. 5.545 ml/kg/min), a higher participation frequency (88% vs. 81%) and a superior completion record (50% vs. 42%) but did not prove to be statistically significant (.05 level) in comparison with Cooper's Aerobic Program. Both 10-wk programs provided significant increases (.01 level) in $M\dot{V}O_2$ gain. Age proved to be a negative factor in the amount of $M\dot{V}O_2$ gain while initial fitness level was not found to be a statistically significant factor (.05 level) in $M\dot{V}O_2$ gain. Wt, smoking, reason for joining study, and jogging alone or with someone did not effect an individual's completion record. Individuals who completed their program were more group tied than self sufficient. The CSPFQ did act as a predictor for $M\dot{V}O_2$ gain.

15. CRYER, Walter. Thomas Kirk Cureton, Jr.: A historical overview of his professional life and contributions. Ed.D. in Physical Education, 1975. 298 p. (M. F. Hartvigsen)

A history was written of the professional life and contributions of Thomas Kirk Cureton, Jr. Consideration and interpretation were given to his life, and professional career as a teacher, researcher, clinician, author and lecturer. The S has contributed to the field of PE in the areas of anthropometry, kinesiology, physiology, tests and measurements, sports (especially aquatics), statistics, and bibliographies. He has assisted other professions and governmental organizations, and has been recognized by a U.S. President. The S received numerous awards for his work, including the Roberts-Gulick Award. He merits the distinction of being one of the most if not the most significant physical fitness educators in the world today. He well deserves the appellation "Father of Physical Fitness in the World", and should be so honored.

16. DENNEY, Ernest A. Personality traits as they relate to intramural participation. M.A. in Recreation Education, 1975. 51 p. (W. J. Hafen)

Differences in personality traits were investigated between nonparticipants and participants in a particular type of intramural activity at Brigham Young University. The EPPS and an intramural survey were used to measure a group of students who used the services of the BYU Career Education Center during the school year 1974-75. Findings showed a significant difference in personality traits (.01 level) between participants and nonparticipants. There was no significant relationship (.05 level) between a participant's personality and the types of activities participated in.

17. DURRANT, Earlene. The effects of jogging, rope jumping and aerobic dance on body composition and maximum oxygen uptake of college females. Ed.D. in Physical Education, 1975. 60 p. (P. E. Allsen)

The effects of jogging, rope jumping and aerobic dance on body composition and MVO_2 were compared while maintaining comparable HRs. Female college students were utilized as Ss in the following groups: exp. jogging (N=27), exp. rope jumping (N=25), exp. aerobic dance (N=30), and a control (N=19). A pre- and post-test was administered to each S. Data were analyzed using ANOVA and the N-KSRT. Results showed no significant differences in MVO_2 between the 3 treatment groups. There was a significant difference ($p < .05$) between the treatment groups and the control. There were significant between-group differences in lean body mass, but no differences in body composition between the groups.

18. ELLIS, Richard R. A review of statements made about the presidents of the Church of Jesus Christ of Latter-Day Saints which refer to their personal involvement in physical education and recreational activities. M.S. in Physical Education, 1975. 79 p. (B. O. Jarman)

Statements made about the presidents of the Church of Jesus Christ of Latter-Day Saints which referred to their personal involvement in PE and REC activities were examined. Resource materials made available by the libraries of the L.D.S. Church and Brigham Young University were utilized. This historical study found that, without exception, the men who have become presidents of the L.D.S. Church have participated in some type of PE or REC activity. Through personal involvement the presidents have encouraged members and non-members in the principle that PE and REC activities help maintain a balance of physical, spiritual, emotional, and social needs of every individual.

19. FERGUSON, Kenneth R. The construction of an athletic profile and comparison of selected physiological and psychological variables for varsity swimmers and wrestlers at Brigham Young University. Ed.D. in Physical Education, 1975. 170 p. (P. E. Allsen)

An athletic profile of varsity swimmers and wrestlers at Brigham Young University was constructed and a comparison made of 18 psychological and 20 physiological variables between the 2 groups. Varsity swimmers (N=11) and varsity wrestlers (N=20) were divided into subgroups: Lightweight and heavyweight wrestlers; short distance and long distance swimmers. Results of data analyses showed no significant between-group differences in the psychological variables. There were significant differences ($p < .05$) exhibited between the groups in the following physiological variables: ht, vital capacity, RLV,

total lung capacity; max expiratory volume; $\dot{M}VO_2$; pain tolerance; power and shoulder extension, knee extension and ankle plantar flexion strength.

20. FISHLER, Jeanette. The effect of a physical conditioning program upon self-concept, peer approval, and physical fitness level of fifth grade students. M.S. in Physical Education, 1975. 27 p. (B. O. Jarman)

The effects of a physical conditioning program upon the self-concept, peer approval and physical fitness level of 5th grade students at Rock Canyon Elementary School in Provo, Utah were examined. The conditioning program lasted 6 wks during which time the Ss participated for 30 min daily in jogging and various exercises. Results showed the t-scores between the exp. and control groups were not significant (.05 level). The experimenter felt that time was a limitation and recommended that the program be conducted over a longer period.

21. HARDY, Clyde Brian. The historical development of Wasatch Trails in Salt Lake County. M.A. in Recreation Education, 1975. 154 p. (B. F. deHoyos)

Investigation was made concerning the etiology of the foot trails that thread their way through Wasatch Forest lands in Salt Lake County. The time delimitation was 1847 to 1975. The origin of the majority of these trails dates back to the 19th Century and is closely tied to the efforts of pioneers who labored to wrest a living from semi-arid land. Early lumbering, livestock operations, mining activities, water collection systems, and pioneer recreation all provided impetus for trail development. In a sense, these trails are a kind of anthology of human endeavor. Passing into the 20th Century it was found that with the exception of emergency relief programs, particularly the Civilian Conservation Corps, very little development has occurred and trail maintenance has been inadequate. Trail prestige increased in the wake of the surge of interest that found legislative expression in the National Trails System Act of 1968. However, in recent years they have been subordinated in the face of what are considered to be matters of greater urgency.

22. HOEGER, Werner, W. K. A curriculum for the preparation of physical educators at the University of the Andes. M.S. in Physical Education, 1975. 119 p. (L. Johnson)

An original, meaningful, and relevant curriculum was developed for the training of physical educators at the University of the Andes. The curriculum was prepared for the professional preparation of undergraduate students for teaching at the ELE secondary, and college levels. The procedure included extensive study of: professional preparation of physical educators in selected universities in the U.S.; professional preparation of

physical educators in Latin America, including all of the programs offered in Venezuela; and existing programs and conditions at the University of the Andes. Information and data were obtained through library resources, lengthy correspondence with the Latin American countries, and suggestions and recommendations made by members of the Brigham Young University faculty for PE. The proposed curriculum was evaluated and unanimously approved by a panel of experts as being valid for its implementation at the University of the Andes.

23. LAMB, John Dee. The incidence of musculoskeletal deviations among junior high age boys. M.S. in Physical Education, 1975. 63 p. (R. S. Francis)

An attempt was made to determine the incidence of musculoskeletal deviations among JHS age boys in Utah Valley JHS's (N=10), to test for independence among schools and grades of the no. of individuals who have each deviation, and to test for independence among schools and grades of each individual musculoskeletal postural deviation. It was found that the incidence of musculoskeletal deviations among JHS boys in Utah Valley was significantly higher than sized. There was no significant difference found in the incidence rate between 7th, 8th, and 9th graders. There was a significant (.05 level) difference in the incidence rate for each of the 10 schools evaluated. It was also found that a relationship existed among the grades and schools relative to the incidence of several individual musculoskeletal deviations.

24. LARSEN, Ronald B. A statistical charting system for spike defense in Men's International Volleyball. M.S. in Physical Education, 1975. 47 p. (C. McGown)

A valid and reliable charting system was developed for spike defense in International Volleyball for men. Sub-problems included determining the performance levels for blocking and digging in Men's International Volleyball and the relationship between spike defense and successful team performance in the 1974 Volleyball World Games for men. Blocks and digs were broken down into categories or types. Block or dig frequency of occurrence and the no. of times that each block or dig resulted in, or led to, the completion of play were recorded. Conclusions included: a statistical system has been devised to chart blocking and digging in International Volleyball for men; stuff kills and blocks which cause hitter errors appear to contribute to how high a team finishes; and digging appears to be less important than blocking in determining the final outcome.

25. LOWELL, John C. Comparison between the grab start and the conventional start in competitive swimming. Ed.D. in Physical Education, 1975. 50 p. (R. Jones)

The grab start and conventional start as used in competitive swimming were compared with regard to time off the blocks, time of flight, time to 20 ft, and angle of entry. AAU swimmers who had achieved "AA" times were selected as Ss (N=20). Each S, thoroughly familiar with both starts, performed 3 conventional and 3 grab starts. Elapsed time for the 1st 3 phases was measured by counting film frames and relating this count to the camera speed of 48 frames/sec. Angle of entry was ascertained by placing a grid over the projection screen. Significant differences were determined by ANOVA (.01-.07 levels). A mechanical analysis and comparison was performed on both starts and results used to supplement statistical data. The main conclusion was that the grab start is the most effective start for the majority of swimmers.

26. MADSON, Richard E. A permanent three-dimensional statuary presentation of the aesthetic quality of the human musculature. M. A. in Physical Education, 1975. 24 p. (B. Jarman)

A permanent statuary presentation showing the aesthetic quality of the human musculature was created by the researcher who explained and presented the finished sculpture to the PE Dept. at Brigham Young University. It was found that since the ancient Greeks, few sculptures have been done displaying the beauty of the muscular system. It was concluded that the human musculature can be aesthetically presented in a sculptured art form. More artistic work of this nature should be executed and displayed by PE depts.

27. MATSON, Larry E. A comparative study of summer programs at destinational winter resorts in Utah. M.A. in Recreation Education, 1975. 60 p. (B. F. deHoyos)

A comparison was made of the recreational facilities and resources available and the programs and activities in use at 3 destinational winter resorts in Utah: Brianhead, Park City, and Snowbird. Only 1 of the 3 resorts was following the national trend by expanding its total yr-round program and placing greater emphasis on its summer program than in the past. Brianhead increased its summer program in 1 yr by 8 times; however, Park City and Snowbird showed no change and a decrease in summer programs in the past 2 yrs respectively.

28. MAXFIELD, John David. The relationship of organic and inorganic particulate matter to selected meterological variables. M.S. in Health Science, 1975. 41 p. (A. Thygerson)

This air pollution study was conducted at the meterological station located at the Richards PE Building on the Brigham Young University campus. The wt relationship between the organic and the inorganic particulate matter in the ambient air was emphasized. The relationship that the moderating variables (wind direction, wind velocity, barometric pressure and temp.) had in predicting the particulate matter loads was also considered. Statistical evidence indicates that a wt relationship exists between organic and inorganic particulate matter. Southeast, southwest and west directions were the best wind direction predictors of organic particulate matter. Southeast, north, and southwest were the best wind direction predictors of inorganic particulate matter. Max daily temp. was considered a valuable predictor of both organic and inorganic particulate matter. Finally, it was found that barometric pressure was a better predictor for inorganic particulate matter.

29. MINER, M. Vinson. A comparison of extramural sports programs in four-year institutions in the State of Utah. M.A. in Recreation Education, 1975. 63 p. (C. T. Thorstenson)

Extramural sports programs of all 4-yr institution of higher learning (N=6) in the State of Utah were compared. They answered a survey designed to obtain the following: the types of extramural activities provided at the institutions; the no. of participants involved in extramural programs; how the institutions administered and directed extramural programs; and how each extramural program was financed and staffed. The following conclusions were drawn: there was a definite need for extramural sports programs to be administered by 1 university office by a qualified extramural sports director; and extramural sports program funding was not meeting the demands and needs of the program.

30. MUNSON, Judith Ann. A study to determine selected factors of women's athletic programs desired by four year college women coaches. M.S. in Physical Education, 1975. 66 p. (R. M. Barker)

Selected factors of women's athletic programs desired by 4 yr. college women coaches were examined. Women coaches (N=145) from AJAW colleges were surveyed via questionnaire (52% were returned). Ss were divided into 3 groups according to age, coaching assignment, and geographical location. Data were tabulated in frequencies and %'s for comparison. X^2 was used to determine any significant differences. Results showed that

there were significant differences (.05 level) in relation to the athletic program selected by the coaches and the variables of age and coaching assignment.

31. NIELSEN, Sherry. A comparison of different survival formats on self-actualization. M.A. in Recreation Education, 1975. 148 p. (C. T. Thorstenson)

The effects of 2 different survival formats on the self-actualization of Ss were compared. It was hypothesized that both programs would facilitate significant changes but that the pilot program would have a greater impact than the traditional course, and that the women would experience more dramatic change than the men. Pre-posttest data from the POI and the T SCS were statistically analyzed by means of t-tests and ANCOVA. In addition, a simple comparison of M pre-and posttest scores and M differences was compiled to provide further information on general growth patterns. The major findings supported the stated directional hypotheses. There were significantly positive changes over time within each program. While no statistically significant differences were found between treatment groups, growth patterns showed greater movement toward self-actualization for participants in the pilot group. Both significant differences and general trends supported the hypothesized greater growth for female participants.

32. ORDYNA, Richard Franklin. Seasonal stress level development of intercollegiate basketball players. Ed.D. in Physical Education, 1975. 120 p. (G. Fisher)

The difference in seasonal development of stress levels between varsity intercollegiate basketball starters, varsity reserves and the "cut" varsity candidats serving as intramural players, and spectators of varsity games was determined. Subproblems were: to determine the relationship of bi-monthly fitness development, as measured by the PPRT, to stress development; to determine the relationship of team determination day to stress development; and to determine the relationship of athletic performance to stress development. Although there was no difference between total stress development from the beginning to the end of the season, there was a difference in stress development among the groups during the season. The day of "cut" was extremely stressful for all Ss. Increased fitness development was related to decreased stress development. As the S's stress level development decreased over the season, performance increased.

33. PIPER, Marlene. The relationship between selected softball statistics and the win-loss records of major women's softball teams. Ed.D. in Physical Education, 1975. 123 p. (B. L. Bangerter)

The relationship was determined between selected softball statistics and the win-loss records of major women's fast pitch softball teams. The study included teams (N=21) from 2 women's softball leagues. Scorebook statistics were summarized from the 1973-74 softball seasons involving 112 league games. Teams were divided into groups A, B, C, or D depending on the league and yr of softball participation. The 24 variables were classifed into pitching, fielding and batting-baserunning statistics. All variables were totaled for each player, team, group and all 1st, 2nd, 3rd and 4th place teams. Winning teams ranked higher in most of the scorebook statistics. Important pitching characteristics included few earned runs and low earned run averages. Winning teams made fewer errors and achieved higher fielding averages. Offensively, winning teams ranked high in hits, runs, triples, stolen bases, sacrifices, extra base hits, runs batted in, batting averages and slugging %'s and had fewer strike outs. Softball coaches surveyed recognized winning team characteristics.

34. RAND, Johathan G. Hair trace mineral level variations with respect to differing types of activity and established normal levels. M.S. in Physical Education, 1975. 36 p. (A. G. Fisher)

Male Ss (N=95) between the ages of 18 and 24 at Brigham Young University, Fall Semester 1974, were participants in this study. Three activity levels and 5 activity types were defined with 19 Ss in each of the activity types. S's scalp hair was analyzed by atomic absorption spectrophotometry for Ca, Mg, Na, K, Fe, Cu, Zn, and Mn content. Analysis results were compared by ANOVA and N-KSRT. Results showed significant variations (.05 level) in several elements, and it was concluded that participants in idfferent types of activity have characteristic variations from normal levels in hair trace mineral content.

35. ROWLAND, Fred Carl. An investigation of selected wrestling techniques and their effectiveness in actual competition. Ed.D. in Physical Education, 1975. 207 p. (P. E. Allsen)

Selected wrestling techniques utilized in 740 HS wrestling matches during the 1975 season were investigated. Collected data were separated into 5 wrestling technique categories including takedowns, controls from referees' position, controls after takedowns, escapes and reversals, and pin techniques. It was found that certain wrestling techniques were more successful (.05 level) than others. By utilizing conclusions drawn from this

study, wrestling coaches can better prepare themselves to coach wrestling.

36. SANDOZ, Joli Ann. Personal fulfillment through recreational need assessment. M.A. in Recreation Education, 1975. 154 p. (J. H. Naylor)

Recreation needs and interests of selected HS students were ascertained and an investigation made as to the possibility of a relationship between them. Students (N=392) at R. A. Long and Mark Morris HS's in Longview, Washington, (21% of the population) answered a survey designed to obtain interest and past participation data concerning specific recreational activities and scores on 10 personal recreational needs (Tillman's Need Indicator). It was concluded that there is very little linear relationship between the variables tested (sex, school, grade, and 10 personality needs) and future participatory interest in activity programs of a recreational nature. The possibility exists that 1, or a combination of several, untested variables are largely responsible for whatever relationship exists between recreational interests and personality needs.

37. SCOTT, David Elmo. The training effect of negative, positive, and level-grade running on selected physiological parameters. Ed.D. in Physical Education, 1975. 117 p. (A. G. Fisher)

The training effect of 3 types of running programs on cardiovascular endurance, body composition, leg power, and quadriceps strength were compared. Ss (N=48) were divided into uphill (positive 10% grade), downhill (negative 10% grade), level (0 grade), and control groups of 12 Ss each. All groups were trained 4 days/wk for 10 wks on a motorized treadmill at a constant HR of 150 beats/min. Pre and posttest differences were analyzed using ANOVA and the N-KSRT. All groups decreased in 1.5 mi run times. The uphill and level groups increased in $\dot{M}VO_2$; the downhill group decreased. No significant difference (.05 level) was shown in the other parameters measured. However, uphill and level training seemed more beneficial than negative training in the criteria measured.

38. SHEPARD, R. Gregory. A comparison of the effects of isotonic, isokinetic and negative resistance strength training programs. Ed.D. in Physical Education, 1975. 68 p. (P. E. Allsen)

The effects of isotonic, isokinetic and negative resistance strength training programs as measured by 3 selected bench press tests were compared. Olympic barbells and a Mini-gym Power Rack were used in this study. Male students (N=91) were assigned randomly into 7 treatment groups. Three groups did 3 sets of 3 repetitions and 3 groups did 3 sets of 8 repetitions. The

7th group served as the control. Pre- and post-tests were given to determine an isotonic, isokinetic and isometric cable tensiometer max. Each group also contained experienced and nonexperienced lifters. Through ANOVA significant differences (.05 level) were found and the following conclusions drawn: all 3 programs improved in strength isotonically; no significant differences were detected among the 3 programs when measuring isotonic or isometric strength gains, or when comparing both set systems; and nonexperienced lifters improved in strength isotonically more than experienced lifters.

39. SMITH, Daniel Elon. The effect of massed and distributed practice on the performance and learning of a stabilometer task. M.S. in Physical Education, 1975. 41 p. (C. McGown)
Distributed practice vs. mass practice efficiency was compared in the performance and learning of a stabilometer balance task. Each S in the 2 groups received 20 consecutive (20 sec) stabilometer trials with each trial followed by 10 sec (massed practice) or 40 sec (distributed practice) of rest. The next day, Ss in both groups received 10 additional stabilometer trials under the distributed practice condition. ANOVA showed that distributed practice is more efficient (.05 level) and therefore superior to massed practice of the performance and learning of a stabilometer balance task.

40. SMITH, Dorman J. A study of factors effecting unsportsmanlike conduct on the part of Brigham Young University intramural basketball and flag football participants. M.A. in Recreation Education, 1975. 81 p. (B. F. deHoyos)
The reactions of participants to suggested reasons for the display of unsportsmanlike conduct on the part of Brigham Young University intramural basketball and flag football participants were investigated and a determination made as to whether sportsmanship ratings for teams were lower (worse) in certain situations or circumstances than in others. Results indicated that those who had displayed unsportsmanlike conduct in intramural contests were inclined to indicate that the major reasons for, or causes of their conduct were poor officiating and game pressure. Those not displaying unsportsmanlike conduct felt that the major reason for such conduct was immaturity or ill temper on the part of the participant. Results also indicated that sportsmanship ratings were lower for teams losing games than for teams winning. Sportsmanship ratings were also lower for independent teams than for teams representing an organization.

41. STORMANN, Wayne Francis. A comparison of the qualifications of recreation superintendents in Utah with national standards in respect to the managing authorities and their hiring practices. M.A. in Recreation Education, 1975, 62 p. B. F. deHoyos)

The qualifications of REC superintendents in Utah were compared with national standards in respect to the managing authorities and their hiring practices. A questionnaire was devised and administered to 10 Utah community REC superintendents, all full-time personnel as classified by their involvement in year-round REC programs. Qualifications and academic background of Utah REC superintendents were significantly lower (.05 level) than the national standards. Data collected indicated that their professional experience upon being hired was not significantly different than the national standards. Indications were that the qualifications that Utah REC superintendents possessed upon being hired were dependent on the procedures utilized to recruit and select them, and not the type of managing authority that did the hiring.

42. TUCKETT, Glen. Evaluation instruments for modular units in Health Science 130 at Brigham Young University. Ed.D. in Physical Education, 1975. 187 p. (D. D. Shaw)

A series of evaluating instruments capable of discriminating between a good student and a poor student using personal health knowledge as a criteria were developed. A total of 424 superior, multiple-choice questions were eventually selected. Eight topic areas, or modules were established and 53 behavioral objectives formulated. Questions were assigned to appropriate behavioral objectives. The testing of approximately 2400 students established the validity and reliability of the tests. The following conclusions were made: personal health information can be categorized into 8 subject matter areas; formulation of specific behavioral objectives is an effective method of establishing instructional goals in personal health; multiple-choice type questions are an effective method of evaluating personal health knowledge; a jury rating and item analysis established validity; and the average reliability coefficient for the 8 modular tests was .8599.

43. WESSON, Karl E. Dance in the Church of Jesus Christ of Latter-Day Saints 1830-1940. M.A. in Recreation Education, 1975. 136 p. (C. T. Thorstenson)

The history of dance in The Church of Jesus Chirst of Latter-Day Saints from 1830 to 1940 was examined. In the 19th Century the Mormon philosophy of recreational dance was radically different from that of other Christian churches. Early Mormon Church membership was drawn from Puritan New England and other areas where churches opposed play and particularly dancing.

Mormon leaders encouraged dancing as a relief from tribulations of a hard day's work. Recreational dance helped to boost the spirits of the people and keep morale high. Dance was never free from restrictions, however, especially those pertaining to worship and rest on the Sabbath. From the scattered and spontaneous dances, characteristic of early Mormon groups traveling west to Salt Lake City, has grown a well organized and highly integrated dance program of today. Dance has truly developed into a vital part of the expansive recreational activity of the L.D.S. Church.

44. ZIMMERMAN, Thomas. A history of the Program Bureau at Brigham Young University. M.A. in Recreation Education, 1975. 127 p. (B. F. deHoyos)

A chronological history of the activities of the Program Bureau at Brigham Young University was compiled. Data were collected from files in the Program Bureau Office and University archives, together with personal interviews and correspondence. It was found that the Program Bureau began as the Public Service Bureau in 1919 and operated under the student body officers. The name was later changed to the Student Program Bureau. In 1932, it was placed under the Office of Public Relations with Janie Thompson as full-time director. The Program Bureau has since performed world wide. Much of its success is due to its talented and dedicated leaders. They have been successful in reaching their goal of producing clean, spiritually uplifting. high quality entertainment. Entertainment has a great force in the world for both good and evil. Program Bureau groups have been an influence for good as the have represented BYU, the LDS Church, and America.

CALIFORNIA STATE UNIVERSITY (WILLIAM R. MARSHALL) CHICO, CALIFORNIA

45. ALOIA, Linda A. The development of a skills test for measuring placement of the tennis service return. M.A. in Physical Education, 1975. 36 p. (Russell K. Cutler)

Two groups consisting of 8 collegiate varsity and 8 advanced players were used to determine test validity which proved .86 ($p < .05$) and .99 ($p < .01$) respectively when test results were correlated with team rank order and results of a round robin tournament. Ten members of an advanced collegiate tennis class participated in a test-retest situation with different test administrators. A combined reliability-objectivity coefficient of .90 was obtained ($p < .01$).

46. CARTER, Philip, T. A comparison of certain physical fitness components among selected junior high school males. M.A. in Physical Education, 1975. 78 p. (Russell K. Cutler)
This study determined if there were differences in physical fitness among American and Australian JHS boys, constructed a scoring system for the test items for the Australian school, and used this scoring system in constructing a grading plan for each event and for the test battery. The events tested were pull-ups, standing long jump, 50 yd dash, and 600 yd run. The American boys scored significantly higher on each test item at each grade level and, with the exception of the 8th grade 600 yd run improved more with grade level than did the Australian boys.

47. ROBINSON, Greg A. The effects of a certain drug on selected weightlifting performances. M. A. in Physical Education, 1975. 82 p. (Russell K. Cutler)
This case study determined the effects of Dianabol on weightlifting performance, visual acuity, certain cardiovascular components, and body weight. The testing program was divided into three 8 wk periods (before, during, and after the use of Dianabol). The exercises studied were the bench press, squat, and clean. The components investigated were: wt, visual acuity (Ortho-rater optical device), BP, and blood content by means of the Profile 14 blood test. Physical performance scores increased significantly using Dianabol. BP, wt, and of the 14 blood component recordings increased significantly using Dianabol, but all returned to normal after it was discontinued. Visual acuity was not affected.

48. STIRNAMAN, Allan F. The increased-increment scale as a method of evaluating performances in selected intermediate school physical ability tests. M.A. in Physical Education, 1975. 59 p. (Russell K. Cutler)
This study constructed increased-increment scoring scales for the 6 basic events of the California Physical Performance Test and utilized these scales in developing a grading plan for use with 6th, 7th, and 8th grade boys. The statistical method of research was employed. A total of 223 students classified by age, ht, and wt were tested. The results provide an additional method of evaluating the progress of students based upon the performances of their peers rather than state norms. It should also aid in motivating the students to perform maximally on the performance test when they understand the basis of the increased-increment scoring scale.

49. VIGALLON, Bernard R. Relationships between physical fitness test scores and other academic variables at Stawell technical school, Victoria, Australia. M.A. in Physical Education, 1975. 72 p. (Russell K. Cutler)

Male students (N=84) at Stawell Technical School were tested for physical fitness by a 5 test battery: the 100 yd dash, 300 yd shuttle run, sit-ups per 1 min, standing long jump, and 50 yd swim. Intelligence was measured by the Otis Higher Test "A" of Mental Ability. Grades were taken from the students' final report in English, mathematics, and science. There were no significant relationships between physical fitness test scores and IQs, or grades.

CALIFORNIA STATE UNIVERSITY, HAYWARD (R. RIVENES) HAYWARD, CALIFORNIA

50. BURNETT, Kevin. Sport and honor in Greek antiquity. M.S. in Kinesiology and Physical Education, 1976. 96 p. (Stanley Clark)

Athletics in Greece from the 9th to the 5th centuries was geared toward the recognition of physical excellence. Honor, arete and nike, as disbursed to individuals and city-states (poleis) in such a manner as to establish a hierarchy of individuals and communities within the culture. The Homeric period (9th and 8th centures) was primarily concerned with lauding great individuals. As the poleis became established and grew from the 7th through the 5th centuries the recognition of a hierarchy of poleis and honoring them accordingly became crucial. In the Homeric period war as well as sport provided the occasion for the display of physical dominance. As warfare developed and became progressively more restricted to group tactics and the suppression of the individual became more pronounced, sport emerged as the only viable testing ground for physical excellence and concomitantly for the disbursal of arete and nike. Hence, athletics were the only area that consistantly provided a theatre for the recognition and establishment of a social hierarchy in Hellenic antiquity.

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE (J. VINCENT) NORTHRIDGE, CALIFORNIA

51. ALLEMAN, Jay R. Effects of massed and distributed practice schedules on trainable mentally retarded in the learning and retention of gross motor skills. M.A. in Physical Education, 1973. (W. J. Vincent)

52. BARR, Joel M. Training techniques for peak performances in swimming. M.A. in Physical Education, 1974. (D. R. Bethe)

53. BENNETT, Ian C. The effects of specificity of reinforcement on the performance of a novel fine motor task. M.A. Physical Education, 1974. (W. J. Vincent)

54. BENNETT, Lorraine A. A photographic description of social problems in sport. M.A. in Physical Education, 1974. (Ann Stutts)

55. BIRD, James W. Effects of leg extension exercises on movement-time. M.A. in Physical Education, 1975. (S. D. Britten)

56. CAMINITI, John A. High school wrestling weight control plans of selected states. M.A. in Physical Education, 1974. (M. D. Hardy)

57. CURBY, Jesusa C. The effect of various periods of mental practice on the learning of a novel gross motor task. M.A. in Physical Education, 1975. (W. J. Vincent)

58. EAGLE, Lauren M. The effect of active language on motor responses. M.A. in Physical Education, 1975. (W. J. Vincent)

59. FEREIRA, Virginia A. An examination of fear of success and achievement in sports. M.A. in Physical Education, 1975. (E. A. Stitt)

60. FLOWERS, Carl V. A semantic differential study of group attitudes toward selected concepts in sport. M.A. in Physical Education, 1975. (E. A. Stitt)

61. GAYTON, James F. A comparative study between general intelligence and levels of bicycle performance. M.A. in Physical Education, 1975. (D. W. Guthrie)

62. HUMPHREY, William E. Comparison of personality traits among college swimmers. M.A. in Physical Education, 1975 (D. R. Bethe)

63. HYDE, Susan J. The relationship between the degree of authoritarianism of female tennis coaches and changes in self-actualization of female intercollegiate tennis players. M. A. in Physical Education, 1973. (D.R. Bethe)

64. KEITH, Wayne R. The effect of knowledge of scientific principles on a running maze. M.A. in Physical Education, 1973. (W. J. Vincent)

65. KROCK, Larry. The effects of varied concentrations of photochemical air pollution on the ability to perform an extended and varied sub-maximal work task. M.A. in Physical Education, 1974. (G. Q. Rich)

66. MASI, Victor J. A study of the relationship between karate training and personality traits. M.A. in Physical Education, 1975. (S. N. Winningham)

67. MORITANI, Toshio. The effect of simulated movements on mental practice. M.A. in Physical Education, 1975. (W. J. Vincent)

68. NEWMAN, Gene A. A weight reducing curriculum for trainable mentally retarded students. M.A. in Physical Education, 1975. (B. T. Swerkes)

69. POLLACK, Douglas I. The effects of training with a weighted baseball on throwing velocity. M.A. in Physical Education, 1975. (W. J. Vincent)

70. WINTERS, Mark D. Personality traits and selected behavioral characteristics of intercollegiate tennis players. M.A. in Physical Education, 1974. (D. R. Bethe)

71. WOLCOTT, Charles F. The effects of an oral electrolyte solution on serum electrolytes following a submaximum exercise stress. M.A. in Physical Education, 1973. (G. J. Holland)

72. YELLEN, Andrew G. The effects of varied repetitions on the development of strength in the leg extension. M.A. in Physical Education, 1974. (D. W. Guthrie)

CENTRAL MISSOURI STATE UNIVERSITY (M. E. LYON)
WARRENSBURG, MISSOURI

73. JONES, Susan Beth. A comparison of segregated and co-educational instruction in archery. M.S. in Education, 1975. 64 p. (M. Lyon)

After 20 class periods of instruction in beginning archery there were no differences ($p > .01$) in skill and knowledge between SHS females and between SHS males enrolled in segregated and co-educational PE classes.

CENTRAL WASHINGTON STATE COLLEGE (J. M. PEARSON)
ELLENSBURG, WASHINGTON

74. BALDWIN, Pamela. A comparison of health items for educable mentally retarded and regular students. M.Ed. in Health Education, 1975. 133 p. (J. M. Pearson)

A health survey composed of 41 items was constructed and administered to EMR and regular students ages 5 to 12. X^2 indicated significant differences for the following items: wears corrective lenses, lethargic in the morning ($p < .10$); comes to school without breakfast frequently, receives free lunches, frequent colds ($p < .05$); and mild to moderate hearing loss, numerous

dental caries, needs oral hygiene, many days absent, physical fitness ratings, and the Wetzel-Griel classifications ($p < .01$).

75. ERIKSON, Anders Edwin. An experimental visual training method for a selected shooting skill in basketball. M.Ed. in Physical Education, 1975. 33 p. (E. A. Irish)

76. JOHNSON, Robert E. A study of health misconceptions among Central Washington State College students. M.Ed. in Health Education, 1975. 54 p. (W. Moore)

77. JONES, Monte R. Parent attitudes toward elementary school physical education. M.Ed. in Physical Education, 1975. 124 p. (J. M. Pearson)

Parents (N=398) of ELE school children in grades 1-5 responded to a questionnaire concerning their attitudes toward ELE school PE. Parents were grouped according to sex, previous experience in ELE PE, college education and professional occupation; responses related to importance, knowledge, assignment of responsibility, teaching method, and communication were included in the comparison. X^2 indicated significant differences in the comparison by sex, past experience in PE, formal education, and occupation.

78. LOHMAN, Jacqueline D. A study of the significance of IQ in a motor learning task. M.Ed. in Physical Education, 1975. 37 p. (J. Gregor)

Girls (N=146) in the 9th grade with IQ scores ranging from 90 to 150 (California Test of Mental Maturity), were given 10 lessons in target archery. A check sheet was used to record 15 possible errors made while Ss shot 3 arrows daily for 8 days. Correlations between IQ score and total errors were positive but not significant. Significant differences were found between the no. of errors made in the 1st and 2nd 4 days of shooting; all IQ levels made significant improvement in shooting form.

79. MAPES, John L. The relationship of physical fitness, self-concept, and academic achievement. M.Ed. in Physical Education, 1975. 45 p. (E. A. Irish)

Boys and girls (N=32) in the 4th grade were given the Washington State Physical Fitness Test, the Davidson-Lang Checklist of Trait Names, and the SRA Assessment Survey, Primary II edition. Correlations were computed between variables; t-ratios were used to determine if significant differences existed between fall and spring data. No significant relationships were found between physical fitness, self-concept, and academic achievement for these students.

CHADRON STATE COLLEGE (Thomas P. Colgate)
CHADRON, NEBRASKA

80. MADGE, Dawn C. Dual stimuli sprint start. M.S. in Physical Education, 1975. 72 p. (Thomas P. Colgate)

A comparison of the sprint start performance times of 48 college Ss responding to auditory and auditory-visual starting signals was constructed. The Ss were divided into 4 groups; males and females, who had run track in HS and those who had not run track in HS. Ss were randomly tested to 5 auditory and 5 auditory-visual starting signals. Analysis was done on speed of reaction and speed of response. No significant differences existed between Ss starting to an auditory stimulus and Ss starting to an auditory-visual stimulus. The Ss did not run 10 yds any faster after receiving the dual stimuli of sound and light than they did starting to the sound stimulus. Significant differences did exist in hand reaction and speed of response between the sub-groups of the Ss.

TEACHERS COLLEGE COLUMBIA UNIVERSITY (BERNARD GUTIN)
NEW YORK, NEW YORK

81. HURWITZ, Richard Frank. A system to describe certain aspects of the physical education teacher's role in the learning-activity selection process. Ed.D. in Physical Education, 1974. 216 p. (W. G. Anderson)

82. ABRAHAM, Lawrence D. Convergence of vestibular and other sensory inputs in the magnocellular medial geniculate body in cat. Ed.D. in Physical Education-Motor Learning, 1975. 120 p. (A. M. Gentile)

83. deVRIES, Leonard Andrew. A procedure for developing purposes for a national curriculum in physical education for Malaysian schools. Ed.D. in Physical Education, 1975. 263 p. (W. G. Anderson)

84. FISHMAN, Sylvia Ellen. A procedure for recording augmented feedback in physical education classes. Ed.D. in Physical Education, 1974. 368 p. (W. G. Anderson)

85. LAUBACH, Susan Ann. The development of a system for coding student behavior in physical education classes. Ed.D. in Physical Education, 1975. (W. E. Anderson)

BESTPED is a descriptive, observational instrument consisting of Form I for research and Form II for Teacher Education. Using this system, trained coders can derive a sec-by-sec description of a student's behavior in PE classes in four dimensions; Function, Mode, Content and Duration. In determining the inter-judge reliability of BESTPED 3 trained coders independently coded 40 different students engaged in a variety of activities

for 2½ min each, yielding an overall agreement of 91.38% and 88.88% respectively.

86. MANAHAN, Joan Elsie. Teacher guidance concerning movement organization and acquisition of motor tasks. Ed.D. in Physical Education-Motor Learning, 1975. 144 p. (A. M. Gentile)

DALHOUSIE UNIVERSITY, HALIFAX NOVA SCOTIA, CANADA (JOHN F. MC CABE)

87. BEST, Clayton M. A study of athletic recruitment, 1975. 69 p. (J. Pooley)

University athletes (N=56) and 18 SHS athletes were interviewed using a combination of open and closed-ended questions. The findings indicated that the 2 main modes of influence were financial assistance and the opportunity of immediate playing time. The most desired personality characteristics of recruiters were honesty, showing a sincere interest, and giving recognition to the athlete. The credibility of the recruiter was based on his trustworthiness. The 2 most prominent characteristics of the athlete were his motivation and level of aspiration. The study also indicated that the amount of advice given to the athlete varied.

88. CELDOMA, Kaiva. A follow-up study of Nova Scotian athletes who participated in the 1967 Canada winter games, 1975. 120 p. (J. Pooley)

This study investigated the present involvement levels in sport by Nova Scotia athletes who participated in the 1967 Canada Winter Games. The variables of sex, age, marital status, education and occupation, residence and type of sport were selected to examine the athletes' level of involvement with the chosen sports. Data were obtained by questionnaires and were analyzed by a X^2. The results indicated that 44.5% of the actual population were presently engaged in the chosen sports at a primary level. There was no significant association between continued primary involvement and the variables of sex, marital status, residence, education and type of sport. However, age was inversely related to chosen sport involvement as older athletes maintained a high level of participation.

89. EBEZE, Stephen O. Psychological inventories for competitive soccer. M.S. in Physical Education, 1975. 83 pp. (Brent S. Rushall)

This thesis developed a self-report instrument for assessing behavior in the competitive and training situations of soccer. It described the procedures required to develop a series of valid behavior inventories. The validity of the constituent tests was established by experienced soccer coaches on the

basis of two criteria necessary for good content validation. The reliability and objectivity of the tests were established in true-life circumstances. This tool is intended to provide coaches with information concerning individual players. Information is analyzed in terms of individual responses. The information obtained from using the tests could be used by coaches to design specific programs to meet individual requirements with a view to improving soccer performance. Two important features of this tool which differentiate it from other psychological tools are: (a) it is specific to soccer, and (b) it interprets the response to each question as being significant.

90. HARGREAVES, J. W. Douglas. Acceptable and unacceptable practices of athletic scholarships as perceived by Canadian university athletic administrators, 1975. 112 p. (H. N. Watts)

Two questionnaires were distributed to the 49 member institutions of the Canadian Intercollegiate Athletic Union (CIAU), the second of which was constructed from the replies to the first. The final opinions were tabulated in numerical and narrative form to facilitate the possible drafting of legislation for inclusion in the CIAU constitution. The results indicated a necessity for the CIAU to redefine its stated position against scholarships since the majority of member institutions, as represented by the athletic administrators, were in favor of some form of financial support for athletes.

91. KETCHESON, G. Lawrence. Effect of the children's developmental clinic on performance of selected perceptual-motor tasks, 1975. 73 p. (J. Lord)

The exp. group (N=10), attended the clinic for 1 hr/wk for 7 wks. The control group (N=9), was on a waiting list for the next clinic term. All Ss were tested on 8 perceptual-motor tasks prior to the clinic term and immediately after the clinic term. The 8 perceptual-motor tasks utilized were measures of the attributes of strength, body part awareness, static balance, dynamic balance, agility, eye-hand coordination, power, and rhythmical timing. The MANCOVA showed there was no significant difference between the groups when all tasks were analyzed simultaneously. A significant difference, favoring the control group, was observed in the eye-hand coordination task when the MANCOVA was utilized.

92. PAGE, Pierre G. Biomechanics of forward skating in ice hockey. M.S. in Physical Education, 1975. 91 p. (L. E. Holt)

A biomechanical-cinematographic analysis was performed on 14 hockey players skating at top speed in a direct line. The stepwise multiple regression analysis indicated that width of the

stride and total recovery time of the skate blade were the most important factors to account for the variance in velocity. Stepwise multiple discriminant analysis also revealed that width of the stride and total recovery time of the skate blade were the most discriminating factors between fast and slow skaters. These results showed that observable and measurable variables accounted for the various velocities even though it might be necessary in a further study to provide more accurate measurements of angles through the use of 3-D film and elgons.

93. RICHARDS, Anthony. A study of the relationship between teaching behaviors and pupil behaviors in the physical education setting. M.S. in Physical Education, 1975. 76 pp. (Brent S. Rushall)

Data were gathered using behavior observation schedules on 4 JHS PE teachers and their classes. A multiple discriminant analysis revealed that in only 1 case did the teachers' behaviors relate directly to the pupils' behaviors. Out of the 4 teachers, 3 taught with a consistent style but all the classes did not respond with consistent behaviors. Future studies should consider teacher behaviors which occur outside of the classroom that affect pupil behavior.

EAST CAROLINA UNIVERSITY (BOB GANTT)
GREENVILLE, NORTH CAROLINA

94. BRADSHAW, Judy E. A comparative study of points of aim and their relationship to shooting accuracy in girls' basketball. M.A. in Physical Education, 1975. 47 pp. (E. Schwarz)

Girls (N=58) in 8th grade PE classes were assigned to 3 groups based on a basketball shooting ability test. A rim group practiced shooting while aiming at the rim, a backboard group aimed at the backboard, and a control group had no additional shooting practice during the 3 wks of training between pre and post-tests. A related t indicated both the rim and backboard practice groups improved ($p > .01$) during the training period. ANCOVA revealed a significant difference ($p > .01$) between the 3 treatment effects on shooting, and Scheffé indicated the backboard group was superior to the rim group or control group ($p > .05$) while the rim group was superior to the control group ($p > .05$) in shooting ability.

95. HICKS, James A. The immediate effects of a single biodose of ultraviolet radiation upon college males on running the 40-Yard dash. M.A. in Physical Education, 1974. 30 pp. (J. Grimsley)

College male Ss (N=24) were tested on a 40-yd sprint one hr after exposure to an ultraviolet lamp, an incandescent light

(placebo), or a control condition involving no light treatment. A double blind counterbalanced procedure was used in administering treatments. ANOVA revealed no significant effects of the treatment conditions on running speed.

96. MOORE, Shanna L. The history of men's intercollegiate swimming at East Carolina University 1952-1974. M.A. in Physical Education, 1975. 146 pp. (E. Schwarz)

A complete history of the East Carolina University Intercollegiate Swim Program was presented, beginning with its origin in 1952. Findings indicated success of the program should be attributed to the efforts of coaches R. Martinez and R. Scharf. Problems unique to the program included a lack of financial aid, geographical location of the institution, and scheduling problems.

97. TERRY, Stephen B. The effects of a muscle relaxant, carisoprodol, on selected motor parameters. M.A. in Physical Education, 1975. 67 pp. (R. Gantt)

Carisoprodol, placebo, and control treatments were administered to college male Ss (N=15) following a double blind counterbalanced procedure. Carisoprodol treatment consisted of oral consumption of 350 mg. tablets (N=4) during a 24 hr period. Placebo treatment consisted of consuming 500 mg. ascorbic acid tablets on a similar schedule. For each treatment, pre and posttests were given on grip strength, power (vertical jump), total body response (RT plus MT), and flexibility (sit and reach). A related t indicated increased flexibility following corisoprodol treatment ($p > .05$). A repeated measures ANOVA revealed no significant difference between treatment effects on flexibility.

98. WHEELER, George W. A study of four selected pulling techniques of offensive lineman. M.A. in Physical Education, 1975. 49 pp. (R. Martinez)

SHS varsity football linemen (N=40) from 10 different schools were tested for time required to execute a pull and trap technique while using 4 different methods (4-point stance with a lead step, 4-point stance with a pivot step, 3-point stance with a lead step, and 3-point stance with a pivot step). A counterbalanced procedure was followed in testing. A 2 X 2 factorial ANOVA indicated no significant differences between stance, method of stepping, or interaction between stance and stepping technique.

EASTERN ILLINOIS UNIVERSITY (WALTER L. LOWELL)
CHARLESTON, ILLINOIS

99. BOWMAN, Richard William. The variability of personality traits in college cross country runners. M.S. in Physical Education, 1975. 66 p. (M. Thomas Woodall)

65 Ss from 9 midwest college CC teams were given the ACL and the Cattell 16PF tests. $\bar{X}$s and SDs were compared with selected athlete and non-athlete profiles. X^2 was used to test the independence between the S's team position and test scores. The "personality profile" of CC runners differs from those of athletes in other sports. A low relationship exists between times and test scores as well as between position on the team and test scores.

EASTERN KENTUCKY UNIVERSITY (HAROLD Z. HOLMES, JR.)
RICHMOND, KENTUCKY

100. CALL Barbara J. A study of the attitudes of university of Kentucky undergraduate physical education majors toward intensive athletic competition for girls. Ed.S. in Physical Education, 1975. 38 p. (M. Mullins)

The attitudes of PE majors (N=143) toward intensive athletic competition for girls as a function of sex, experience in coached athletic competition, and yr in college was studied using a questionnaire and the attitude inventory developed by Harris. Females had a higher $\bar{X}$ attitude score than males ($p < .05$). Level of experience and yr in college were not related to attitude scores.

101. EARLY, James Malcolm. The effects of agility and flexibility training on a university volleyball team. Ed.S. in Physical Education, 1975. 52 p. (H. Holmes)

A Japanese style volleyball training program to improve agility and flexibility was studied using a college men's volleyball team (N=10) and a non-training control group (N=9). Both groups took a battery of 5 tests 3 times in 10 weeks. Neither group improved in the test battery assumed to measure volleyball playing ability.

FLORIDA STATE UNIVERSITY (J. R. THOMAS)
TALLAHASSEE, FLORIDA

102. ARRANTS, Selena L. Biomechanical and physiological adjustments to treadmill walking by female subjects naive to the treadmill. M.S. in Movement Science, 1975. 119 p. (C. H. T. Ward)

This study quantified the initial physiological and biomechanical adjustments to treadmill walking by women between the ages

of 30 to 50 yrs, naive to the treadmill, and the effects of such adjustments upon research data variability. Women from the community (N = 16) were tested once a wk for 4 wks for several trials. The physiological variables reported were $\dot{V}O_2$, V_E, HR, alveolar ventilation (V_A), and respiration frequency (f). Biomechanical variables reported were double support time (DS), single support time (SS), stride length (SL), stride rate (SR), and horizontal and vertical displacement of the center of gravity (HD and VD). The physiological and biomechanical data were subjected to separate multivariate ANOVA, followed by a univariate ANOVA of each dependent variable. Significant differences occurred in the data of 7 variables ($\dot{V}O_2$, V_E, V_A, f, DS, SS, and SL) between wks 1 and 2 only. VD and HD showed no significant changes over the 4 sessions. HR and SR showed significant differences between each of the 4 sessions. Results indicate that adjustments in physiological and biomechanical data by female Ss naive to treadmill walking does occur, primarily during the first 2 sessions. Higher stress levels during testing may require an extended adjustment period.

103. BOONE, William T. The effects of a muscle endurance training program on cardiovascular endurance as measured on the bicycle ergometer. Ph.D. in Movement Science, 1975. 57 p. (R. J. Byrd)

This study determined the effects of a muscle endurance training program on selected cardiovascular functions of 18 yr old college fresh. The design was a pretest-posttest with exp (N=20) and control (N=20) groups. The exp. group trained 3 days per wk for 9 wks. Steady state and max measurements were used to test the effects of the training programs. ANCOVA revealed significant differences in the adjusted posttest $\bar{X}$s for: resting HR, steady state HR and muscular endurance. No differences were found for: steady state $\dot{V}O_2$, cardiac output, AV O_2 difference, O_2 pulse, max $\dot{V}O_2$, HR, PWC, strength or thigh measurements. Data indicate that the muscular endurance training program was not sufficient to cause changes in cardiovascular efficiency.

104. BOSSERMAN, Larsen Z. The effect of three levels of exercise on the coronary vasculature of adolescent and adult male albino rats. Ph.D. in Movement Science, 1975. 64 p. (R. J. Byrd)

The effect of 3 training programs, administered on the basis of HR response to exercise, upon the coronary vasculature of adolescent and adult male albino rats was investigated. Male rats (N=72) were housed and trained in a treadmill modified to allow ECG monitoring of exercise work bouts. Equal numbers of adolescent and adult animals were assigned to exercise at 80% and 60% of the available HR range and to control groups. At the

end of a 10 wk program changes in the capacity of the coronary arterial tree were measured using a modification of the technique of Tepperman and Pearlman (1961). There were no differences between exp. groups and control groups for body wt exercise HR and heart wt. Exercise at 60% HRR appeared to enhance heart wt/body wt ratios ($p < .05$) in adults. Eighty % HRR seemed a detrimental load for this same group. No changes occurred for either treatment among adolescents.

105. BOYCE, Robert W. Estimation of body density and lean body weight in 25-to 37-year-old females using selected anthropometric measurements. Ph.D. in Movement Science, 1975. 101 p. (D. Smith)

This study attempted to determine the predictability of lean body wt and body density from ht, wt, 7 skinfold, 9 diameter, and 18 circumference measurements using a stepwise regression model. Body density determined by the hydrostatic technique was obtained from 61 volunteers. $\bar{X}$ body density was 1.0405 g/ml (SD $\pm$ .0131), $\bar{X}$ % fat was 25.08% (SD $\pm$ 5.55) and $\bar{X}$ lean body wt was 42.14 kg (SD $\pm$ 4.64). It was found that circumferences, skinfolds and circumferences, diameters and circumferences, and skinfolds, diameters, and circumferences best predicted both body density and lean body wt. The circumference prediction equations which included the wt variable are probably the most practical for use (R = .820, SE_{y-x} = .0079 g/ml for body density and R = .910, SE_{y-x} = 2.013 kg for lean body wt). When predicting the body density of our population with formulas derived from other populations, a decrease in prediciton accuracy was observed.

106. GATCH, Wendel H. A comparison between the effect of two physical training programs on cardiovascular function of 9- and 10-year old boys. Ph.D. in Movement Science, 1975. 92 p. (R. Byrd)

107. HIGHTOWER, Denese K. A socio-psychological comparison of selected, rejected, and defected college female athletes. M.S. in Movement Science, 1975. 120 p. (R. N. Singer)

The personality traits of collegiate females who were categorized as selected, rejected, and defected athletes; individual/dual sport athletes and team sport athletes; and athletes associated with specific sports were compared. Ss were 249 female undergraduate athletes attending colleges and universities in the state of Florida. Forms A and B of the 1967-68 edition of Cattell's 16PF and a personal information questionnaire were administered to all Ss. After the final selection of team members had been made, the experimenter requested the coach to place the athletes into 1 of 3 categories (selected, rejected, or defected). Stepwise discriminant analysis was used to

determine the order in which each of the 16 profile components best distinguished the athletes. The selected sport athletes tended to be more happy-go-lucky whereas the rejected athletes were more serious. Individual/dual sport athletes were more mature, emotionally stable, assertive, happy-go-lucky, imaginative, shrewd, experimenting, and self-sufficient than team sport athletes. No personality differences were found among the basketball, gymnastics, swimming, tennis, track, and volleyball athletes. X^2 analysis run on each question from the personal information questionnaire revealed significant relationships between background data and participation in athletics.

108. MAUL, Terry M. Parents' identification with the athlete role of their offspring involved in competitive swimming. M.S. in Movement Science, 1975, 80 pp. (D. Pargman)

This investigation was designed to determine if parents identify with the athlete roles of their offspring who are involved in a regularly scheduled competitive swim program. A form of the Semantic Differential (Osgood, 1952) was developed in order to measure identification between parent and child. The instrument contained a set of concepts which had been established as highly idiosyncratic to competitive swimming through a previously conducted pilot study. Identification was measured by the degree of similarity of attitude between parent and child in response to these concepts. The Semantic Differential instrument was administered to members of 40 families with children participating in a program of competitive swimming. Results of the testing were then analyzed by the following methods: Groups X Trials ANOVA, Multiple R, and Pearson r. The frequency and strength of attitudinal relationships among parents and their athlete children was only moderate, therefore suggesting a lack of support for identification proposed in this study.

109. MOON, Donald H. Developmental variables in children's performance rhythm ability. Ph.D. in Movement Science, 1975. 139 p. (J. Thomas)

Performance rhythm was investigated in 6-, 8-, and 10-yr old children. The effects of several independent variables (type of stimulus, type cue, and kinesthetic repositioning ability) on the performance elements of a rhythmic task were investigated. This response to a stimulus using an arm swing device required spatial and temporal accuracy relative to a target. The design called for 96 children at each age level to be tested for dynamic kinesthetic repositioning ability. Children at each age level with scores in the upper (N=24) and lower (N=24) quartiles then practiced the rhythmic task with manual or verbal instructional cues. Rhythmic ability was evaluated by testing Ss with audio, visual and tactile stimuli. Reliable performances and a close

relationship between spatial and temporal errors were found. Among stimuli, audition was superior with spatial measurements; audition and tactile were superior with temporal measures. Significant interactions indicated deteriorating performances when multiple stimuli were presented in a like channel, combinations of variables effect temporal responses, and verbal cues were more effective for the 6-yr-old child.

110. PEASE, Dale G. Initial learning, transfer, and relearning of serial motor tasks as a function of instructional strategies as well as task complexity and testing strategies. Ph.D. in Movement Science, 1975. 121 p. (R. Singer)

The effects of learning guided versus discovery strategies on transfer and relearning were investigated, using a serial motor task. Female college students (N=128) were assigned to either a guided or discovery condition for the initial learning experience. The second learning experience involved a test of transfer under either guided or discovery conditions, with 2 levels of task complexity. Part 3 of the study involved a test of relearning the initial sequence under the initial strategy. Activation measures were taken on 3 occasions using the Thayer AD ACL. Guided learning was shown to be the most efficient in initial learning. The most effective transfer occurred when the condition of testing was similar to the initial learning strategy. In relearning, the Ss who experienced discovery conditions in both the initial learning and transfer learning experienced greater interference effects. Task complexity was not a performance variable when related to the instructional strategy employed. No significant differences in activation were associated with the 2 learning strategies.

111. ROYER, Donald. Anatomical and physiological profile of physically handicapped children. Ph.D. in Movement Science, 1976. 115 p. (D. Smith)

Physically handicapped boys, 9 to 15 yrs of age (N=120) were subjected to a comprehensive anatomical and physiological evaluation in an effort to determine (1) the extent to which the dependent variables investigated changed with age, and (2) how the variables differed between normal and physically handicapped children across age groups. After a medical examination and an orientation session, each subject was submitted to a battery of tests in order to determine ht, wt, arterial BP, serum cholesterol, body composition, pulmonary function, grip strength, and PWC. The same pattern of change with age, as reported for normal children, was also found in physically handicapped children, although lower values for pulmonary function grip strength, and PWC were obtained. The incidence of obesity (11%) and elevated serum cholesterol (18%) was striking. The variables that

contributed most to the significant multivariate effect were PWC_{170} in absolute values, body density, PWC_{170} per kg of lean body wt, vital capacity, and left hand strength.

112. TORRANIN, C. Physiologic effects of dehydration and rehydration on isometric and isotonic endurance. Ph.D. in Movement Science, 1975. 124 p. (R. Byrd)

The effects of dehydration and rehydration on isometric and isotonic local endurance work were investigated in 20 male college Ss. Ss ranged in age from 21 to 30 yrs and were randomly assigned to exp. and control groups. Exp. Ss in isometric work were in the control group in isotonic testing, and vice versa. Multivariate ANCOVA was used to test differences between the 2 groups of Ss on selected physiological responses under dehydration, euhydration, and rehydration conditions in both types of exercises. Results revealed that HRs during submax work were elevated, while endurance was decreased as a result of 4% dehydration. Physiologic responses to exercise were almost normalized after rehydration. Isometric and isotonic work were affected by dehydration in a similar fashion, but the latter to a higher degree. Based on the size of muscle groups, the larger the contracting muscle group, the greater the effects of dehydration. The exact mechanisims need further investigation at the cellular level.

113. VACHON, L. Transfer effect of discimination and motor component instructions on early and later phases of the acquisition of skill. Ph.D. in Movement Science, 1975. (R. Singer)

This study was to determine whether instructions on 2 task components associated with performance on a particular motor task would produce different transfer effects at different stages of practice on that task. Male college Ss (N=52) were placed into 4 groups: a control group, an irrelevant component instruction group, a motor component instruction group, and a discrimination component instruction group. Each exp. group originally learned a task component which was followed by 30 learning trials on a 2-hand coordination task. The results indicated that component instructions interacted with states of learning in producing transfer effects. Discrimination component instruction showed positive transfer effects at the early stage of learning while motor component instruction facilitated task completion time performance during learning and interfered with time off pathway performance at a final stage of learning. It was concluded that stages in motor skills learning constitute a determinant factor in the transfer of previous learning and the relation between component instructions and learning criteria is important in determining transfer effects.

114. WILLIAMS, Jean M. Effects of evaluative and non-evaluative coactors upon male and female performance of simple and complex motor tasks. Ph.D. in Movement Science, 1975. 145 p. (R. Singer)

The interactive effects of sex, arousal, task complexity, and evaluative apprehension on social facilitation were investigated. The 96 male and 96 female college Ss were equally divided into 2 groups which performed either a simple or complex serial motor task. A third of the Ss performed with a non-evaluative coactor, a third with an evaluative coactor, and the remainder performed alone. Of the coacting Ss, half performed with a coactor of the same sex and half with a coactor of the opposite sex. The tasks contained well-defined right and wrong responses and permitted a quantification of habit hierarchy. The error data on the complex task offered strong support for Zajonc's social facilitation prediction. Performance was equally impaired for both the mere presence and evaulative coaction groups. However, no differences were found during simple task performance. There were no differential sex effects. Physiological data failed to support an autonomic arousal interpretation of social facilitation effects. Performances by low and high arousal Ss interacted differentially with task complexity and social conditions.

GEORGE PEABODY COLLEGE FOR TEACHERS (J. M. GRAVES) NASHVILLE, TENNESSEE

115. BLACK, Kenneth D. Developing and evaluating cardiovascular fitness measures in preschool normal and mentally retarded children. Ed.D. in Health and Physical Education, 1974. 88 p. (H. L. Garrett)

Twelve mentally retarded, 26 culturally deprived and 39 normal preschool children were measured. A modified Balke Treadmill Test was adopted as the standard of cardiovascular fitness. This was compared with age, ht, wt, bent-knee sit-ups, 100 yd run, shuttle run, and 3 measures of PR obtained from a step test. Administrative feasibility was determined by % of valid scores. ANOVA determined differences between groups, age and sex. Corelation and regression analysis were performed to determine the significant predictors of treadmill performance ($p > .05$). None of the tests proved appropriate for mentally retarded preschool children or nonrelated children under the age of 5 but all proved appropriate for normal children over the age of 5. Only one variable, the 100 yd run, was a significant predictor ($r = .80$) in any combination of variables. Performance increased with age. There was no difference between boys and girls. The culturally deprived subjects performed significantly better on the suttle run and pulse recovery.

116. FOLIO, Mary R. Validation of a developmental motor scale and programmed activities for the development of motor skill achievement in preschool children. Ed.D. in Physical Education, 1975. 103 p. (L. Garrett)

In addition to determining the effectiveness of the programmed activities, reliability data were obtained on the Peabody Developmental Motor Scales (PDMS). A total of 96 Ss, 53 males and 43 females comprised the groups. The $\bar{X}$ CA for non-delayed Ss was 45.2 mo and 48.3 mo for delayed Ss. Four measures with the PDMS were obtained. The exp. curriculum was administered to exp. groups for 30 min per day, 4 days per wk, for 12 wks. The exp. curriculum was individualized from pretest results. Control groups received their existing curriculum consisting of a less structured program than the exp. groups. Hypotheses were tested by employing a 3 factor ANOVA with repeated measures on a single factor. Interrater and test-retest reliability were determined through the Pearson product moment technique. Results: delayed Ss scored significantly lower than non-delayed Ss on the PDMS; non-delayed Ss receiving the exp. curriculum scored significantly higher than non-delayed control Ss at the final testing occasion, as compared to the 3 previous testing occasions; significant correlations were found for motor age scores obtained by independent raters; significant correlations of motor age scores were found on test-retest occasions.

117. KINDER, Thomas M. A criteria for a graduate program in athletic administration based upon job analysis of athletic administrators in selected southeastern states. Ed.D., 1975. 201 p. (D. Johnson)

This study first determined the current duties of athletic directors in colleges with enrollments of 7,500 or less, in selected southeastern states. The selection of 80 athletic directors, 8 in each of the 10 southeastern states, was completed by a panel of active athletic and physical education experts. Second, it evaluated the duties according to frequency, importance, and difficulty of performance using a checklist rating scale. On the basis of these data, courses in preparing directors are needed. Finally, a list of courses based upon recommendations of 6 experts in Administration Curriculum Development were used to produce a graduate program.

118. REEDY, James A. An investigation of faculty work load in physical education and athletics in selected small, private colleges. (H. L. Garrett)

PE administrators in 64 private institutions in 8 athletic conferences in the Middle Atlantic area were surveyed as to current policies and practices in assigning faculty work loads. Staffing trends and causes of work load problems were identified in the 43 participating schools. Differences in male and

female loads were scrutinized, and PE assignments were compared with those in other departments. Estimations of clock hrs per wk and %s of total load were obtained for specific teaching, coaching, and administrative tasks. It was concluded that the clock hr method of assigning loads was superior to credit hr, contact hr or student credit hr methods due to the deficiencies of the latter 3 in dealing with tasks other than teaching. Insignificant r's were found between breadth and financial aspects of programs and most work load factors. Level of competition and won-lost records in basketball also had insignificant effects on most aspects of load. Guidelines for assigning PE and athletic work loads in small, private colleges were drawn from the survey data and included in the appendixes.

119. SPRAGUE, Homer A. The relationship of certain physical measurements to swimming speed in male age group swimmers. Ed.D., in Health and Physical Education, 1974. 90 p. (L. Garrett)

A no. of physical measurements were taken on 107 boys ages 7 through 17 who swam competitively. Other independent variables (e.g. ankle flexion and buoyancy) were recorded as well as best competitive swimming times for each of the 4 competitive strokes. Data were analyzed in several ways with swimming time (or function thereof) as the dependent variable in a stepwise multiple regression computer program with all other variables entered as possible predictors. Swimming time was converted to a ratio of that time to the appropriate age group record and physical measurements to proportions of ht. Doing this, larger feet were found to be associated with slower times for freestyle, backstroke, and butterfly; and larger biceps were found to be associated with faster times in freestyle, breast, and butterfly. Other variables found significant for at least one stroke in this type of analysis were skinfold, center of gravity, waist size, ankle flexion, and age within age group. The variable "length of time in competition" was, as expected, the most significant variable in all analyses of all types.

GEORGE WILLIAMS COLLEGE (JACK J. JOSEPH)
DOWNERS GROVE, ILLINOIS

120. HARDY, Michael R. Effects of training at different stress levels and detraining on the cardiovascular efficiency of middle aged males. M.S. in Physical Education, 1975. 45 p. (J. Joseph)

121. JOYCE, John F. Relationship of selected heartometer measurements to oxygen pulse. M.S. in Physical Education, 1975. 22 p. (J. Joseph)

122. MEYER, Joseph. Effectiveness of practice shooting on a smaller rim on the improvement of basketball free throw shooting. M.S. in Physical Education, 1975. 30 p. (J. Joseph)

123. MORREY, John R. Personal motivational factors for playing high school baseball. M.S. in Physical Education, 1975. 23 p. (J. Joseph)

124. MOSES, Calvin. Physical fitness of educable mentally handicapped and normal pupils at selected public schools in Chicago, Illinois. M.S. in Physical Education, 1975. 27 p. (J. Joseph)

125. REILLY, Kathleen L. Position of the valve as an influencing factor in the floating action of the volleball serve. M.S. in Physical Education, 1975. 18 p. (J. Coleman)

GEORGIA SOUTHERN COLLEGE (D. J. COTTEN)
STATESBORO, GEORGIA

126. BIASIOTTO, Judson L. A validation of the 600, 900, and 1200 yard run-walk tests. Ed.S. in Physical Education, 1973. 42 p. (D. J. Cotten)

This investigation determined if the 600, 900 and 1200 yd run-walk tests are valid and reliable indicators of cardio-respiratory fitness for 3rd, 5th, and 7th grade male students. Ten male Ss were selected by a stratified random sample from each grade level and tested on the 600, 900 and 1200 yd run-walk tests. The Balke Treadmill test was used as the criterion measure. The results of the investigation revealed that while the 600 yd run-walk test is a valid indicator of cardiorespiratory fitness for 3rd (r = .96) and 5th (r = 186) grade students, they are questionable measures for 7th (r = .76) grade students. Also, the 900 and 1200 yd runs were no better than the 600 yd run for measuring cardiorespiratory fitness.

127. ELDER, Geoffrey C. B. Comparisons of fitness levels and personality traits of college freshmen experiencing varying degress of high school physical education and sport participation. M.S.T. in Physical Education, 1973. 91 p. (F. H. Ramsey)

This study was an evaluation of fitness levels of HS graduates entering college and the effectiveness of PE programs offered in Georgia schools in developing cardiovascular fitness. Students who had participated in PE, varsity sports, and neither were compared on the Balke Treadmill Test. Personality traits were examined by Cattell's 16PF. The results indicated that greater participation in PE did not necessarily increase a

student's fitness. The group that participated in PE and sports rated higher in cardiovascular fitness. Personality differences did exist on a group basis, but no cause and effect relationship could be determined.

128. PACK, D. Michael. Effect of four fatigue levels on performance and learning of a novel dynamic balance skill. M.Ed. in Physical Education, 1973. 66 p. (D. J. Cotten)
This study investigated the effect of 4 levels of fatigue on the performance and learning of the Bachman Ladder Task. Male Ss (N=48) were randomly assigned to 4 groups. A level of fatigue, as determined by HR (Control, 120 BPM, 150 BPM, and 180 BPM), was assigned to each group. Each S was given 20 trials on Day 1 to learn the task while at his designated fatigue level, and given 20 trials on Day 2 under control conditions. Performance data for Day 1 indicated that severe physical fatigue (150 BPM and 180 BPM) impaired performance of the motor task. Learning score data indicated that severe fatigue (150 BPM and 180 BPM) had a detrimental effect on learning of the Bachman Ladder Task. The data did not support the inverted-U hypothesis.

INDIANA UNIVERSITY (JOHN M. COOPER)
BLOOMINGTON, INDIANA

129. ADAMS, David Lee. A study of health instruction programs in the public secondary schools in Tennessee. H.S.D., 1975. 172 p. (D. Ludwig)
The participation of a random sample of Tenn. SHSs included completing 2 types of health status questionnaires, 1 by each school's principal and 1 by the health teacher; testing HS srs. with the Seffrin Health Cognition Test; and completing a follow-up questionnaire concerned with apparent weaknesses in health instruction as determined by the analysis of the status questionnaires. The questionnaires were completed by 77 secondary school administrators and 122 health teachers in 77 schools (23% of public secondary schools in Tenn). The health knowledge of 12th grade students in 72 schools was determined by testing 7,317 with the SHCT. To compare the relationship of selected status survey items and the results of the health knowledge test, methods for determining scores for teacher preparation and course content were made. Relationships were measured by product-moment correlation. The follow-up questionnaire was completed by 34 SHS principals and 47 health teachers. It was found that students on the average exceeded the norms on the SCHT. HE, with academic credit is required for graduation. Time in the school curriculum devoted to health instruction is equal to time allotted to other subjects.

130. BAUGHMAN, William H., Jr. A knowledge test for emergency medical technicians. H.S.D., 1975. 209 p. (J. K. Rash)
After a preliminary EMT test was constructed, reviewed by a test construction class and the doctoral committee, and revised, it was validated by a jury of experts and then revised accordingly. The EMT test was used in a pilot study, then 2 trial applications were administered to (N=400) students in selected cities of Ky. and Ind., at the completion of an EMT course of instruction. Following evaluation of the analysis of data the test was further refined, leaving a total of 210 items. The revised EMT test was administered to 124 students who were completing the EMT course. The responses were analyzed for item difficulty, index of discrimination, and item reliability. The final 150 item form of the EMT test was administered to Ss to obtain an estimate of the whole test reliability. The EMT test instrument was validated by a jurty of experts and the intra-class r was calculated to be .976. The Kuder-Richardson estimate of reliability was calculated to be for the final 150 item form of the EMT test.

131. BEDI, John F. Angular momentum in the long jump. Ph.D. in Physical Education, 1975. 96 p. (John Cooper)
Two methods of measuring the angular momentum during 2 different phases of the long jump were proposed. During the airborne flight phase of the jump the angular momentum must satsify the equation $\vec{N} = \frac{d\vec{l}}{dt} = 0 \Rightarrow L = \text{Constant}$, and by definition, $\vec{L} = \vec{r} \times \vec{p}$. Thus the angular momentum could be determined by knowing the distance and momentum vectors for each segment. It is possible to measure the angular momentum produced during the take-off phase of the jump. During this phase the angular momentum may be found from the equation $\vec{L} = \int \vec{N}\, dt = \int (\vec{r} \times \vec{F})$. In order to satisfy these equations, an exp. situation was created in which both force plate and its accompanying electronics and high speed cameras were placed in an already existing runway. The 8 Ss exerted max effort in order to win the trial over their peers. Cinematographical and strain gauge techniques were used to satisfy the equations. The average of the values obtained for the angular momentum during the flight phase of the jump was positive and indicative of forward rotation (11.22 ft·lb·sec). This compared favorably with that obtained by computer simulation. The large standard error (13.85 ft·lb·sec) was due to the inherent error in calculating velocities from positional data. The angular momentum produced at take-off was indicative of a forward rotation but was different from that measured during the flight phase 72.20 ft·lb·sec). Better jumpers spent less time on the take-off board and produced a larger vertical and thrusting impulse.

132. BEHR, Mary T. Tests to assess the oral and dental knowledge of community college and four-year college students. H.S.D., 1975. 250 p. (D. Ludwig)
A total of 109 multiple-choice, 4 alternative oral and dental knowledge questions were constructed and reviewd by 2 juries for test construction and content validity. Following item revision the test was administered to 270 Ss, then revised again based upon difficulty and discrimination indices. A test administration followed and item analysis was performed on 311 tests results from 5 community colleges and 369 tests from 6 4-yr colleges. Item difficulty and discrimination indices were again utilized and acted as a basis for rejection or retention. Two final 51-item tests were developed, 1 for community colleges and 1 for 4 yr colleges. The KR-20 reliability coefficient of the test for the community college sample was .79 and for the 4 yr college sample was .81.

133. BURELLE, Jacques V. Qualifications of athletic directors of member institutions of the Canadian Intercollegiate Athletic Union. P.E.D., 1975. 162 p. (J. Endwright)
An amended version of the Youngberg questionnaire was used to identify the qualification or athletic directors in the CIAU. The instrument contained 53 qualifications athletic directors might possess. All 48 athletic directors at member institutions of the CIAU for the 1974-75 academic yr completed the questionnaire. The results were analyzed in terms of 5 variables: age of respondents, highest degree earned, yrs the athletic directorship has been held, athletic conference within the CIAU, and size of on-campus undergraduate enrollment. The athletic directors were well qualified for their positions in terms of general education, coaching experience, sports participation and professional involvement but were not well qualified in terms of administrative experience and "related" education courses.

134. CAREL, William H. III. An analysis of leisure attitudes of selected Indiana University personnel. Re.D., 1975. 266 p. (T. Deppe)
The investigator researched the official listing of 13,276 IU employees at the Controller's Office and compiled a random sampling of 870 people who fell into 1 of 8 occupational rank codes. The questionnaire on leisure developed by Neulinger was adopted and submitted to the 870 Ss. The composition of the 678 employees who returned their questionnaires in terms of age, sex, income, education, etc. was determined. The data were factor analyzed and a one-way ANOVA was conducted for each of the robust factors. Scheffé multiple comparisons were conducted if a significant F value was obtained in the ANOVA. There were no differences among the occupational groups and their attitudes

toward the desirability of work and leisure, determining society's role in leisure planning, or to the affinity to leisure. There were no differences in describing the meanings of work and leisure for each of the 8 occupations. Personnel received more satisfaction from work related activities than leisure related activities.

135. CLOVER, Robert J. Tactile sensitivity and swimming ability: exteroceptive perception of aquatic stimuli by three levels of college male swimmers. P.E.D., 1975. 85 p. (J. Counsilman)

An instrument was constructed to innervate a 8b immersed fingertips by means of a jet of water from 1 or 4 directions. Each exposure could be varied by duration and intensity. A test was devised to present the 16 possible combinations of these factors twice each in random order. A pilot study was conducted to verify and improve use of the instrument, the test, and the testing procedures. The test was administered to 3 groups of 10 college males representing 3 levels of swimming ability. The data were organized statistically by a hierarchial design and subjected to an ANOVA to determine their significance. Fingertip sensitivity of college males to an aquatic stimulus was independent of levels of swimming ability. Swimmers apparently do not depend on their fingertips for primary cues in adjusting the pull pattern of their swimming strokes. Stimulus durations and intensitities closer to stimulus threshold levels may elicit more differential responses from college males at different levels of swimming ability.

136. CRADEN, Michael D. Garrett G. Eppley, his life, philosophy, and professional contributions. Re.D., 1975. 297 p. (J. McLean)

A survey consisting of a mailed questionnaire and a series of personal interviews was conducted with those people deemed most familiar with the life, professional philosophy, and major contributions of Garrett G. Eppley to the park and recreation field. The survey tool was developed with the assistance of a jury of professionals knowledgeable in the events, philosophy, and contributions of the subject. In addition to evolving a statement concerning Eppley's philosophy, the study also included the major professional contributions Eppley made to the profession. They were: the founding and direction of the Great Lakes Park Training Institute at Pokagon, Indiana; the development of the Dept. of Rec. and Park Adm. at IU; the initiation of the undergraduate and graduate recreation curriculums at IU, and the guidance, encouragement, and inspiration he gave to his students and colleagues.

137. FLATTEN, Evalyn K. A study of the relationship between amplitude scores by gymnastics judges and measured by cinematographic techniques. P.E.D., 1975. 74 p. (J. Cooper)

The problem was to measure cinematographically the amplitude present in performance of a compulsory uneven parallel bar routine and to compare these findings with the amplitude scores awarded to these routines by a team of judges. A film record was made of 30 elite gymnasts performing the 1972 Olympic Uneven Parallel Bar Compulsory routine at the Semi-Final Try-Outs for the 1972 Women's Olympic Gymnastic Team. The judges' final scores for these routines were released to the researcher along with the portion of each score awarded for the amplitude performed in that routine. The amplitude evaluation from the film was based upon the height of the casts, horizontal stretch of the glides and the area under the curves formed by plotting the path of the gymnast's center of gravity during the execution of the false eagle and long kip stunts. These data were converted into standard scores and correlated with the amplitude scores awarded by the team of judges using the Pearson product moment formula. The hanging length was also measured from the film and correlated with the judges' amplitude scores. The 2 amplitude evaluations were in agreement, indicating that the judges were able to identify and score the amplitude performed in each routine. The low correlation between the gymnast's body length and amplitude scores indicated that a gymnast's size does not seem to affect the judge's evaluation of the "bigness of her moves."

138. FOLEY, John F. An analysis of the duties and responsibilities of selected administrators of health, physical education, and recreation in New York State. P.E.D., 1975. 427 p. (J. Daugherty)

A questionnaire was developed and mailed to 275 members of the NY State Council of Administrators of HPER resulting in 208 usable returns, or a 75.6 response. The writer then developed a measurement instrument listing 97 duties that was submitted to a panel of 14 educational experts and revised to contain 93 duties in 10 categories, and this instrument was utilized in a pilot study of 30 administrators resulting in a statistical reliability of .838 based on test-retest procedure. The writer visited the Ss in the final phase of the study to administer a face-to-face interview, the revised questionnaire, the revised measurement instrument with 93 duties, and a form designed to elicit response concerning priorities and %s of time spent in 10 areas of responsibility. A personal and professional profile was developed for the 36 Ss. Analysis of the results indicated that every one of the 93 duties were performed by some of the

Ss. Four of the duties were continuously performed, while none was classified as being difficult, but 13 were qualified as being of great importance. The Ss considered PE instruction the most important area of responsibility, but spent more time performing duties associated with interscholastic athletics.

139. GROSSHANS, Iona R. Delbert Oberteuffer: His profesional activities and contributions to the fields of health and physical education. H.S.D., 1975. 263 p. (J. K. Rash)
This study was divided into the following: Memories of an Oregon Childhood, The Making of an Educator, An Opportunity in Ohio, Delbert Oberteuffer at the Ohio State University, Physical Education Activities Culminating in the Bulick Award, Earning the Howe Award in Health Education, Formulation of Lifelong Points of View, and Delbert Oberteuffer: An Appraisal. Procedures were by means of a personal tape-recorded interview and/or a mailed questionnaire to family, friends, former students, colleagues, and professional associates of Dr. Oberteuffer, including the subject of the study himself. Examination of speeches, articles, textbooks, and personal documents, honors, citations, and awards were sources of information. Delbert Oberteuffer possessed a variety of talents: writer, speaker, teacher, editor, and critic, which enabled him to stand out as a leader in both the HE and PE professions. He was the first and possibly because of the increased specialization in the 2 fields, will be the last person to receive the highest award for professional services from both the HE and PE professions, namely, the Howe Award and the Gulick Award.

140. GUNNER, Robert W. Performance and persistence on the hand dynamometer as a function of achievement motivation. P.E.D., 1975. 130 p. (J. Daugherty)
Ss (N=68) were randomly selected from students who scored above 96 and below 85 on the TAQ. The motive to avoid failure and the motive to achieve success were assessed by means of the TAQ, TAT and MAS. The situational variables which modify these factors were assessed by Xs or rating scales in which each S estimated his probability of success for performance and persistence. From these rating scales, the subjective probabilities for success and failure were computed as well as the incentive values for success and failure. Scores for each S were recorded on 4 trials of grip strength (R-L-R-L hands) and converted to X grip strength/lb of body wt. Two-thirds of the X strength of each hand was calculated and Ss were given 2 trials of persistence at this setting. The X of the 2 trials was the S's persistence score. The Ss were ranked from high to low on the different aspects of the theory of achievement motivation, then dichotomized at the median. The t-test was utilized to determine significant

differences between the resulting groups. The Pearson product moment correlation technique was utilized to determine the degree of relationship between the 2 indices of resultant achievement motivation.

141. LOVELAND, Norma J. Principles and desirable practices for evaluation of performance of selected recreation personnel. Re.D., 1975. 195 p. (T. Deppe)

A jury of REC and personnel professionals selected principles and desirable practices for performance evaluation of REC personnel. A survey instrument composed of the desirable practices was sent to a random sample of REC executives for their response of opinion and use. Median responses, X^2 tests of independence, and Spearman rank correlations were used to analyze the data for each of 5 variables and total response. Important and most used practices included: clear meaningful statements of criteria used, and focused upon the results on the job in keeping with the philosophy of the department. Desirable practices selected by the jury and approved by the sample of municipal REC executives would constitute guidelines for the performance evaluation of municipal REC personnel.

142. MANUEL, Kathryn A. A standardized knowledge test for a water safety instructor course. P.E.D., 1975. 423 p. (A. Aldrich)

Two preliminary forms of the test were administered to students in WSI classes in selected SE colleges and universities. After an item analysis of the results of the preliminary test forms, a final test was developed and administered to students in selected colleges in the SE area of the U.S. different from those participating in the preliminary test. A test manual was then developed. The final test had a KR-20 reliability coefficient of 0.83. A multiple-choice test of 83 items may be given conveniently during a single class period of 50 min. The final WSI test is a valid and reliable instrument for measuring the knowledge and understanding acquired in a WSI course by college students.

143. MURPHY, William Daniel. A history of state parks and recreation areas in Nebraska. Re.D., 1975. 321 p. (T. Deppe)

Data were collected from primary and secondary sources, subjected to the processes of historical criticism, organized on a thematic and chronological basis, and presented in a historical narrative. Nebraska's first state park was designed in 1921. Areas were added to the state park system through the civic spirit and philanthropy of individual citizens and communities. During the depression of the 1930s the system was aided by federal agencies. the state parks then entered a period in

which they experienced little development and were regarded as a secondary priority. Legislation improved the status of the parks. Several historical parks were designed. Efforts were initiated to provide adequate outdoor recreation areas in the populous eastern section of Nebraska. State Parks were established in Nebraska to conserve scenic and/or historic areas. Support from private sources was excellent but the state government was laggard in its initial efforts. Federal assistance aided in the development of the state park system in Nebraska. During the 1960s the system was expanded to provide a variety of recreational areas for the public.

144. SPARKS, Kenneth E. Physiological and mechanical alterations due to fatigue while running a four-minute mile on a treadmill. Ph.D. in Physical Education, 1975. 137 p. (J. Cooper)

The parameters measured were: O_2 consumption during the run, O_2 debt induced by the run, lactic acid accumulation, alterations in selected joint angles at various times during the run, various temporal factors for the different components of the running stride, stride length and stride frequency and foot contact in relationship to the body's center of gravity. The Ss were 5 well trained middle-distance runners. Physiological parameters were measured during the 4 min mile run and for each 1 min segment of the 4 min run to assess the physiological response to the exercise. The energy expenditure for each min of the 4 runs was determined from the O_2 consumed during the run and during the recovery minus the resting consumption of O_2. Mechanical analysis was made using the cinematography. A 16 mm motion picture was taken during the last 5 sec of each min during the 4 min mile run. Descriptive statistical summaries were calculated for the physiological and mechanical alteration due to fatigue. The ability of a runner to perform well is dependent upon his ability to consume and utilize O_2. Better performers supply more energy via the aerobic system and therefore produce less O_2 debt. There are 2 definite styles in running based upon the time of support and non-support, and each style responds to fatigue differently. Fatigue causes the stride length to shorten and the stride frequency to increase. The exact time that fatigue occurs depends upon the ability and capacity of the runner to tolerate levels of stress.

145. WEISS, Paul Stephen. Health service programs related to fertility contol in community colleges in the United States. H.S.D., 1975. 310 p. (D. Ludwig)

A randomly selected sample, with replacement, of 115 community colleges in the U.S. was surveyed with an adaptation and modification of A Descriptive Analysis of Health Service Programs in Public Community Colleges in the United States. The 2 part

questionnaire was designed for and answered by the chief college administrator and the health service administrator. Information summarized by computer and the Yale series provided A X^2 value for measuring significance between the hypotheses items and all other items contained on the questionnaire. Examination of the descriptive data showed the extent and depth of the fertility control programs at community colleges was limited. Institutions offered or provided the most extensive fertility control health service programs usually were non-public institutions, those having a part-time enrollment of 1,500 or more, those having students who were primarily of either low or high socioeconomic status.

146. WINKELMAN, Jack L. The status of the basic health education course offered at community colleges in three selected counties of southern California. H.S.D., 1975. 192 p. (B. I. Loft)

A revised version of Barry D. Campbell's An Evaluation Instrument for the Basic Concentrated Community College Health Course was administered to HE educators teaching the basic HE course in community colleges within the counties of Los Angeles, Orange and San Diego. Common practices of health educators were determined by analysis of 32 responses to the survey instrument.

KANSAS STATE UNIVERSITY (CHARLES B. CORBIN)
MANHATTAN, KANSAS

147. DWIGHT, Mary P. Heart rate and estimated energy cost of women's basketball practice. M.S. in Health, Physical Education and Recreation, 1975. 78 p. (W. B. Zuti)

148. GIBSON, Bradley. An evaluation of a lecture-laboratory program of physical education. M.S. in Health, Physical Education and Recreation, 1975. 70 p. (C. B. Corbin)

149. HATFIELD, Katheryn. Psychomotor learning and retention relative to the presence or absence of behavioral objectives. M.S. in Health, Physical Education and Recreation, 1975. 78 p. (R. Wauthier)

150. HOWE, Jerome. A personality study of the male athletes of the International Track Association. M.S. in Health, Physical Education and Recreation, 1975. 93 p. (John Merriman)

151. MC MULLEN, Bonita K. Attitudes toward physical activity of high school girls with older athletic siblings. M.S. in Health, Physical Education and Recreation, 1975. 79 p. (C. B. Corbin)

152. MERKLEY, Jay P. The identification of core competencies at the master's degree level in recreation. M.S. in Health, Physical Education and Recreation, 1975. 74 p. (D. Lindley)

153. MURRAY, Patrick. A comparative cinematographical analysis of male and female Fosbury flop high jumpers. M.S. in Health, Physical Education and Recreation, 1975. 95 p. (Jan Merriman)

154. SHIMON, Paul. The effects of different levels of dextrose intake in endurance running. M.S. in Health, Physical Education and Recreation, 1975. 79 p. (W. B. Zuti)

155. SMITH, Ronald. The effect of wind on heart rate of submaximal performance of conditioned treadmill runners. M.S. in Health, Physical Education and Recreation, 1975. 3[illegible] p. (W. B. Zuti)

KENT STATE UNIVERSITY (R. BOS)
KENT, OHIO

156. ALLENSWORTH, Diane. Pinworms: the need for education based upon a clinical incidence study and a knowledge and attitude survey. M.A. in Health Sciences, 1975. 79 p. (G. Knotts)

This study ascertained (1) the incidence of pinworms among a population of children not living in an institutional setting, (2) the level of knowledge about pinworms among the general population, prospective educators, and parents, and (3) the availability of information which would educate the general public about the manifestations of pinworms. Of 305 patients, ages 2-14, who were tested for pinworms at a community hospital, 51 tested positive, an incidence rate of 16.7%. The results of the knowledge and attitude survey, which was administered to 393 university students, and data from parental interviews, revealed a complete lack of understanding about the life cycle and clinical manifestations of pinworms. The survey of HE textbooks used in public schools in Portage County, Ohio, revealed a paucity of information on the topic of pinworms.

157. GALLIT, David L. A comparison of the philosophic beliefs of male and female athletes and non-athletes. M.A. in Physical Education, 1974. 74 p. (B. L. Seidel)

A study of the differences between male and female athletes and non-athletes using the Ames Philosophical Belief Inventory (Form M) ($APBI_m$) was conducted utilizing 92 Kent State University volunteer freshmen undergraduate Ss. The $APBI_m$ yielded scores in 5 philosophical positions: idealism, realism, pragmatism, existentialism, and phenomenology. The mean scores of responses

in the various philosophical schools, by groups, were computed and 5-2 X 2 ANOVAs were employed to examine the findings for any obtained differences and/or relationships. Males scored significantly higher in realism and lower in existentialism than females. No significant differences were found between athletes and non-athletes on any of the 5 philosophic positions.

158. LAWSON, David L. Physiological parameters limiting performance in middle distance and sprint running. Ph.D. in Physical Education, 1975. 229 p. (L. Golding)

The mechanisms of the aerobic energy system, the anaerobic energy processes and certain muscle fiber characteristics of the vastus lateralis muscle were determined for 20 male Ss of varying running ability and statistically related to running performance over 100 yds, 440 yds, and 2 mi. Significant correlations were established between 100 yd running performance and the Margaria-Kalamen Index, max O_2 deficit and the cross sectional area of the fast twitch fibers. Max $\dot{V}O_2$, max O_2 deficit and the Margaria-Kalamen Index were the parameters most highly related to 440 yd running performance. The aerobic capacity of the S, % slow twitch fibers, % body fat and VC showed a significant relationship to 2 mi running performance.

159. VAN HANDEL, Peter J. Uptake and utilization of exogenous glucose during endurance exercise. Ph.D. in Physical Education, 1975. 136 p. (L Golding, D. Costill)

The metabolic fate of two orally ingested glucose-U-^{14}C solutions taken late in prolonged exercise was determined. Trained male Ss (N=6) cycled on a bicycle ergometer (50% $\dot{V}O_2$ max) for 180 min on 2 separate occasions. After the first 120 min of each trial, the S ingested 1 of the test solutions. These were a 2.5% (10.0 g/400 ml) or a 10.6% (42.4 g/400 ml) D-glucose solution. Glucose-U-^{14}C (50 uCi) was added to each drink. Parameters measured included plasma lactic acid, glucose, glucose-^{14}C, free fatty acids, respiratory exchange, sweat and urine-^{14}C activity, and $^{14}CO_2$ output. Little of an orally ingested glucose load is used to meet the oxidative energy demands of the muscle under the conditions imposed in this study. The respiratory exchange and free fatty acid data indicate that fat was the major energy source throughout these experiments, as ingestion of the glucose solution had no effect on the R or plasma FFA levels.

LOUISIANA STATE UNIVERSITY (JACK K. NELSON)
BATON ROUGE, LOUISIANA

160. BAKHIAD, William H. Administrative policies and procedures for large multi-purpose arenas on university campuses. Ed.D. in Physical Education, 1975. 121 p. (F. A. Drury)

Questionnaires were sent to 86 universities which met selected criteria concerning the operation of multi-purpose arenas. The questionnaire was sub-divided as follows: general information, personnel, organizational procedures, scheduling, finance and maintenance. The data were interpreted by descriptive analyses and % of total response. Among the findings were that the main arenas are generally designed for athletic events and entertainment productions. Most of the facilities are operated by either the athletic department or business office. Spectator events have top priority, although PE and intramurals are often given limited usage. Booking and promoting of events are generally shared by the facility administrator and various university departments or organizations. Most large multi-purpose arenas are not capable of financial self support and are dependent upon the university general funds, athletic budgets and student fees.

161. BOLEY, Eleanor H. Generality and specificity of motor performance of children as related to age and sex. M.S. in Physical Education, 1975. 63 p. (J. K. Nelson)

A total of 100 boys and 100 girls from grades 2, 4, 6 and 8 were tested on hand MT, total body response time and running velocity. Inter-correlations were computed and percentages of variation determined to ascertain the degree of generality and specificity. Performances of boys and girls at the different age levels were compared by a 4 X 2 ANOVA. While all Ss demonstrated task specificity, there were no differences in amount of specificity between the girls and boys, or between age groups. Boys were superior in gross movement tasks; girls were superior in limb speed. The performances of both boys and girls improved linearly with age.

162. GANTT, Robert B. The effect of a single exposure of ultraviolet rays on performance in selected motor parameters. Ph.D. in Physical Education, 1975. 95 p. (R. E. Steben)

A group of conditioned Ss (N=20) and a group of sedentary Ss (N=20) were exposed to both an ultraviolet sunlamp and a placebo incandescent lamp using a counter-balanced order, with treatments 2 wks apart. Within 24 hrs of each treatment the Ss were given a motor performance test consisting of a vertical power jump, a total body response test, an elbow flexion strength

test, a 30 yd sprint, and the Balke-Ware treadmill test. A 2 X 2 ANOVA with repeated measures was utilized to compare performance with regard to light conditions, groups and interactions. Motor performances involving speed were not affected by ultraviolet (UV) irradiation. There were no differences with regard to physical condition of the Ss as to their response to UV. PWC and elbow flexion strength were significantly impaired following the UV exposure. It was concluded that a single exposure to UV irradiation will not serve as an ergogenic aid for motor performance and may even be considered ill-advised.

163. HART, Clare C. O. The significance of the mask in African dance. M.S. in Physical Education, 1975. 113 p. (H. E. Fant)

The multiplicity of function served by masquerade performances was illustrated by describing the masked dances performed by several different ethnic groups in Black Africa. Cultural practices associated with the masking tradition were noted for all groups studied and cross cultural comparisons made among them to determine common practices. The major findings were that masquerades are less powerful instruments of government than they were 50 yrs ago, and are now performed mainly as a method of catharsis and for entertainment. The most common cultural traits noted were that masking is predominantly a male role, and sculpting a totally male profession. All groups studied were agriculturalists. The advent of Islamization and Christianization has tended to discourage the use of representational art.

164. JOHNSON, Patricia A. Competition between females and males at different age levels on perceptual motor performance. Ed.D. in Physical Education, 1975. 62 p. (J. K. Nelson)

A card sorting task was given to 240 male and female Ss from 4 age groups, 8-, 12-, 16-and 20-yr olds, under 2 conditions: competition against opponent of same sex and competition against opponent of opposite sex. The task consisted of sorting color-coded cards into a color-coded compartmentalized box for a 30 sec period. A split-plot ANOVA indicated that the females outperformed the males in the task regardless of age or competitive situation. Perceptual-motor performance improved with increased age. Overall, competition with the opposite sex was not different than with the same sex.

165. PATTERSON, Linda S. A comparison of seventh and ninth grade girls on level of aspiration and performance in strength and endurance tasks. M.S. in Physical Education, 1975. 71 p. (J. K. Nelson)

The Ss were 120 JHS girls. All Ss were tested for performance

and level of aspiration (LOA) on 4 tasks: grip strength, backlift strength, an isometric sit-up and a step-up task. For each task, 3 trials were given, and a statement of LOA was recorded after each performance. t-tests indicated that 9th grade girls were more realistic in goal setting for both strength and endurance tasks than 7th grade girls, and were more reluctant to engage in strenuous, prolonged endurance activities as reflected by LOA scores. There were no significant differences in the strength and endurance performances.

166. SIMS, Roy J. The influence of different mental tasks on the heart rate of the college male during exercise. Ed.D. in Physical Education, 1975. 109 p. (F. A. Drury)
Male adults (N=80) exercised on a treadmill under 4 conditions: a simple mental task; a difficult mental task; a free association mental task; and control with no assigned mental activity. The Ss ran for 1 min at 10% grade at 2 mph and 5 mph for 5 min. The HR was monitored every min by a cardiotachometer. In the mental tasks, questions were projected 1 at a time on a screen. The data were analyzed by a split-plot ANOVA. The results indicated that HR during exercise can be influenced by mental processes. Simple problems and free association mental distraction significantly reduced the rate of increase in HR while exercising. Difficult mental problems increased the HR during exercise. The effectiveness of mental distraction on HR appeared to be greater as the exercise progressed.

MANKATO STATE UNIVERSITY (R. B. MOORE)
MANKATO, MINNESOTA

167. MEETH, Timothy R. Effects of different grips for the serve among beginning tennis players. M.A. in Physical Education, 1975. 38 pp. (R. D. Gorman)
Three intact 9th grade girls' PE classes at Mankato West HS were randomly assigned to the Western grip, the Eastern forehand grip and the control group (total N=78) and were pretested for serving ability. The 2 exp. groups were given 5 days of serving instruction while the control group received no instruction. Immediately following the 5 days of instruction, a posttest was conducted. Ten 30 min class periods were used to complete the study (5 days for instruction and 5 days for testing). The DiGennaro Tennis Test of Achievement-Service Section was used as the serve test. An ANCOVA was used to analyze the data and there was not a significant difference in serving ability.

MIDDLE TENNESSEE STATE UNIVERSITY (P. MC CLELLAN)
MURFREESBORO, TENNESSEE

168. ADKINS, Dave M. Description and analysis of a physical education program at a foreign university. D.A. in Physical Education, 1975. 124 p. (S. Hall)

The physical fitness of 31 male PE students at the University of Lourenco Margues in Mozambique, Africa, was compared with 31 American athletes at a liberal arts college in the U.S. t revealed American athletes were significantly ($p < .05$) taller and heavier than African PE majors. Results of AAHPER fitness tests indicated that African PE majors performed significantly better on the 600 run-walk and pull-ups. American athletes were significantly superior in the standing broad jump, shuttle-run, 50 yd dash, and sit-ups.

169. ALTERI, Roger E. The effects of interval and endurance running upon anthropometric and physiological parameters in college-aged females. D.A. in Physical Education, 1975. 209 p. (P. McClellan)

Female Ss (N=64) were randomly assigned to 1 of 4 running regimens: interval running 2 times/wk; long slow-distance endurance running twice/wk; interval training 3 sessions/wk; and long slow-distance endurance running 3 times/wk. Data were collected prior to and after 10 wk of training. Measurements were taken related to ht, wt, 9 circumferential assays, 7 skinfolds, 4 body composition assessments, 5 blood chemistry variations, and 12 cardiovascular parameters. Results of ANOVA and Duncan's multiple range indicated: all 4 groups had significant ($p < .05$) increases in serum lactate dehydrogenase, and distance covered in 12 min run test. The groups that trained 3 time/wk had significant increases in max $\dot{V}O_2$ and reduced diastolic blood pressure. The groups that trained 2 times/wk had significantly reduced resting HRs. No significant differences were noted among the results of interval training groups and long slow-distance endurance running groups.

170. BARTON, Robert M. Competency-based objectives for introductory courses in athletic training. D.A. in Physical Education, 1975. 200 p. (A. H. Solomon)

A checklist relating to the content of introductory athletic training classes was forwarded to 20 supervisors of training programs in U.S. Based upon results of the survey, competency based objectives were developed in 24 subject areas: ankle, back and spine, resuscitation, contrast applications, cryotherapy, drug education, equipment and supplies, protective equipment, elbow, foot, and and wrist, head and face, heat problems, internal injuries, knee, muscular problems, neck, nutrition, personnel relations, physical examination,

rehabilitation, shoulder, skin, therapy and healing. A 70/70 criterion was established through use of the objectives in a class (N=32) at Florida International University.

171. BRADLEY, Elizabeth P. Body image, movement concept, and body composition of obese college women in a weight reduction program. D.A. in qhysical Education, 1975. 153 p. (J. Barber)

Female Ss (N=32) who possessed 30% body wt fat were assigned to a 15 wk class designed for wt reduction. The class met 2 times/wk and instruction included: material related to proper dietary controls; group interaction related to wt reduction; and a physical fitness program of jogging at least 1 mi. Pre- and posttests were administered to determine body image, movement concept, % fat and total wt. ts revealed significant ($p < .05$) decreases in % fat and body wt. No significant changes were noted in body image and movement concept.

172. BRADLEY, William F. A comparison of three instructional methods on the improvement of selected badminton skills. D.A. in Physical Education, 1975. 83 p. (G. Reeder)

College Ss enrolled in badminton classes were randomly assigned to 1 of 3 treatments: traditional instruction (N=23); traditional instruction plus videotape replay (N=21); traditional instruction plus loop film observation (N=20). Each class was taught by the same instructor and met 50 min twice weekly for 6 wk. Brumback short and clear tests were used to assess skill achievement. Pre-post ANOVA revealed significant ($p < .05$) increases in skill using all 3 methods of instruction. No significant posttest differences were noted among the 3 groups.

173. CRITES, Jerry K. A study of selected physiological and psychological factors to determine their relationship to the performance of the crawl stroke by beginning swimmers. D.A. in Physical Education, 1975. 72 p. (F. Riel)

In order to predict swimming ability, 6 tests were administered to college Ss (N=40) prior to and after 5 wk of American Red Cross Beginning Swimming Instruction. Tests administered were: Sloan nomogram for total body fat, revised Fox power swimming test, shoulder and hip extension strength, shoulder flexibility and Daugert swimming anxiety scale. A significant correlation ($r = .89$) was found between the swimming test and anxiety scale. All other correlations were not significant.

174. FARR, John P. Physiological responses to weight reduction in high school wrestlers. D.A. in Physical Education, 242 p. (P. McClellan)

Athletes (N=34) from a SHS championship wrestling team were tested 5 times throughout a 13 wk wrestling season. 54 different tests were taken during each testing period. ANOVA and

Duncan's multiple range test revealed no significant changes ($p < .05$) in age, ht, pwc_{170}, body diameters, scapulae skinfold, white blood count, red blood count, hematocrit and chloride concentrations. Significant decreases were noted in wt, triceps, suprailliac, and abdominal skinfolds, elbow flexion strength, hemoglobin and potassium concentrations. Significant increases were noted in grip and elbow extension strength, pull-ups, dips, and sodium concentration levels.

175. REISELT, Richard W. An investigation of the non-professional basic instruction physical education program at the University of Tennessee at Martin. D.A. in Physical Education, 1975. 96 p. (S. Hall)

A questionniare related to course preferences was developed and validated through the use of a jury of PE professionals. The questionnaire was mailed to 200 soph. and jr. college Ss. Based upon a return of 130 it was determined that: 97% took activity classes to learn new skill; 87% preferred lifetime sports; 75% desired to take additional classes beyond the requirement of 3 quarter hr; and there was a significant relationship ($r = .61$) between activities taken in HS and college. Additional recommendations were included for improvements in the UT Martin curriculum.

176. ROBINSON, Herbert J. An evaluation of the men's physical education programs in selected state community colleges in eastern and middle Tennessee. D.A. in Physical Education, 1975. 159 p. (G. Penny)

The Neilson-Comer-Allsen Score Card was used to evaluate men's PE programs in 6 state community colleges. The score card was completed through visitation on the campus of each college. The community colleges rated excellent in professional assistance and above average in instructional staff. The overall rating for teacher education programs was average. Poor ratings were noted in facilities, program organization and program activities. Intercollegiate athletic programs were limited with heavy emphasis on basketball and baseball.

177. SHAW, Willie G. A description of general education requirements in physical education for selected private predominately black four-year colleges and universities in Tennessee, Alabama, and Georgia. D.A. in Physical Education, 1975. 98 p. (A. H. Solomon)

The visitation-interview technique was used to assess the status of required PE activity programs in 14 predominately black colleges. The visitation-interview was carried on exclusively with the departmental chairperson who also filled out a questionnaire similar to the instrument developed by Oxendine. PE activity classes were required and academic credit was given at

all institutions; coeducational classes were offered at 6 institutions; 13 institutions used the letter grading system which was consistent with that used in other portions of the curriculum, and during the past 5 yrs, lifetime sports classes had increased in 12 schools.

MONTANA STATE UNIVERSITY (E. KREIGHBAUM)
BOZEMAN, MONTANA

178. OLSON, Gregory D. The relationship of reaction time and movement time to racquetball success. M.S. in Physical Education, 1975. 50 p. (E. Kreighbaum)

This study compared racquetball success with RT, MT, and total time (TT) between 2 groups of 11 players. The groups were established according to the results of a double elimination tournament. The top and bottom 11 finishers formed the high and low ability groups respectively. TT and RT data were collected while MT was computed. t- and F tests indicated that: The $\bar{X}$ TT, RT, and RT variability were significantly lower in the high as compared with the low ability group, but the $\bar{X}$ MT and the MT variability were not significantly different between the 2 groups.

NORTH CAROLINA CENTRAL UNIVERSITY (ROSS E. TOWNES)
DURHAM, NORTH CAROLINA

179. EDWARDS, F. Ruth. Scholastic records of male athletes and non-athletes at Gaston High School, Gaston, North Carolina. M.S. in Physical Education, 1976. 34 p. (R. E. Townes)

Twelfth grade English averages, over-all averages, and grade-point quartile rankings of 42 athletes and 42 non-athletes at Gaston HS during the 1970-1975 period were used in this study. No significant differences between athletes and non-athletes were found when over-all averages and grade-point quartile rankings were compared. Non-athletes had better averages in English than athletes ($p < .02$). There was a low negative relationship between the English averages and over-all averages for the top 10 athletes, and a high positive relationship between these factors for the top 10 non-athletes.

180. HILL, Bettie M. The physical fitness levels of seventh grade girls before and after a planned program of physical education. M.S. in Physical Education, 1976. 47 p. (R. E. Townes)

A study was conducted conducted at East Cary JHS, Cary, NC, during the 1974-75 school yr to determine the physical fitness levels of 100 12-yr-old 7th grade girls before and after a

planned program of PE. A program consisting of conditioning exercises, team games, individual and dual games, stunts and tumbling, folk and square dance, gymnastics, track and field events, and games of low organization was used. The AAHPER Youth Fitness Test was used to assess physical fitness levels. These Ss were ranked in proficiency in the components of physical fitness as follows before a planned PE program: strength, arm and shoulder girlde strength, leg power, endurance, and agility and speed. These Ss were ranked in proficiency in the components of physical fitness as follows after the planned PE program: abdominal strength, arm and shoulder girdle strength, speed, leg power, endurance, and agility. The difference between the performance before and after the planned program was significant ($p < .01$).

181. MERANE, Doris J. Physical fitness levels of black and white ten and thirteen year old girls. M.S. in Physical Education, 1976. 38 p. (R. E. Townes)

The AAHPER Youth Fitness Test was administered to 2 samples of black and white 10- and 13-yr-old girls at Milton M. Somers Middle School in LaPlata, Md., during the 1974-75 school yr to determine the difference between the physical fitness status of 4 samples. There were significant differences between certain of these components; however, inly the white 10-yr-old girls and the black 13-yr-old girls, as a group, were significantly different ($p < .01$) on the test as a whole.

182. PERRY, Olivire. The attitudes of students, teachers, and administrators toward physical education as a required subject. M.S. in Physical Education, 1976. 48 p. (R. E. Townes)

The Wear Attitude Inventory, 40 positive and negative items concerning attitude toward PE as a required subject, was administered to 754 students, 166 teachers, and 13 administrators of the Martinsville, Va., City School System in the spring of the 1974-75 school yr. The attitudes of the administrators and teachers were between agreement and strong agreement toward PE as a required subject, while the attitudes of students were between undecided and agreement. There was no significant difference between the attitudes of teachers and the attitudes of administrators toward PE as a requirement. There was a significant difference between the attitudes of administrators and teachers, and those of the students ($p < .01$).

NORTH TEXAS STATE UNIVERSITY (ROBERT W. PATTON)
DENTON, TEXAS

183. BERTHELOT, Ronnie J. An analysis of perceived exertion of a graded isometric muscle contraction of the forearm flexors under conditions of magnitude production and magnitude estimation. M.S. in Physical Education, 1975. 70 p. (R. Patton).

This study analyzed an individual's ability to perceive levels of exertion of an isometric contraction. Two samples of college students were tested under magnitude production or magnitude estimation. A significant F was obtained for magnitude production but not for magnitude estimation. This study concluded that Ss tested under magnitude production will perceive the 100% level with the least amount of error and that error will increase as the percentages descend. Ss tested under magnitude estimation will be equally in error when perceiving percentages of a max contraction of the forearm flexors.

184. DOBBS, Paul W. The professional status of boys' interscholastic league athletic coaches of Northeast Texas in relation to the American Association for Health, Physical Education and Recreation's recommendations for certification. M.S. in Physical Education, 1975. 69 p. (J. Douthitt)

This study found that the requirement of a degree, previous playing experience in the primary coaching field, and professional activities of HS coaches in NE Texas appeared adequate. The coaches' professional preparation in PE seemed inadequate according to certification recommendations of the AAHPER. Many of the coaches met all of the recommendations. The coaches indicated support for a certification program for future coaches. Recommendations were included in the study.

185. ERTER, Jeannette L. A determination of recreational activities of greatest interest to members of senior centers in Texas. M.S. in Recreation, 1975. 104 p. (D. Bailey).

This study determined what recreational activities were of greatest interest and appeal to members of 9 sr. centers in Texas according to their age and sex. The 9 sr. centers were randomly selected from the 42 centers in Texas. A minimum of 25 members at the selected centers were asked to respond to a questionnaire concerning their recreational activity interest. A total of 264 respondents completed the questionnaire, 79 males and 155 females. The questionnaire consisted of 9 recreational activity categories designed to cover a wide range of interests. Table games were the activities indicated by the respondents (88%) to be of greatest interest, while dancing (47%) was of

least interest. Activities that included social contact had the greatest interest to the respondents. Sr. centers should stress social group activities and provide more outdoor life activities.

186. FLETCHER, Tara J. "Nivritti," an original dance composition based on selected phases of the ocean and its relationship with the sun and the moon. M.S. in Physical Education, 1975. 109 p. (G. Williamson)

This study arranged, developed, and staged creatively a complete dance composition in 4 parts using the ocean as a thematic source. The 5 purposes relating the theme and the choreography were developed and expressed through the medium of modern dance. A written report including the historical and scientific background of the thematic source and the choreographic process was also submitted. A videotape recording is also available of the completed dance composition.

187. GOTCHER, Judith F. A comparison of self concepts among "starter" and "substitute" female college athletes in selected varsity sports. M.S. in Physical Education. 1975. 87 p. (P. Richardson).

This investigation determined if differences exist between the self concepts of female intercollegiate athlete starters vs substitutes, and team vs individual sport members. It also determined if a significant relationship exists between coaches' ratings of an athlete and the athlete's self concept, using the Tennessee Self Concept Scale. An F ratio was used to determine if the self concepts of athletes who make the starting line-up are significantly different from those who substitute. Data received from the Coaches' Questionnaire were analyzed by the Spearman rank order correlation. The results revealed that the self concepts of athletes in basketball, softball, volleyball, tennis, and badminton are not significantly different and the coaches' ratings of athletes and athletes' self concept ratings are not significantly related.

188. JAMES, Russell D. An investigation of the relationship between health education and physical education. M.S. in Physical Education, 1975. 65 p. (J. Douthitt)

The relationship between HE and PE as areas of specialization was examined as perceived by selected HE and PE educators in 5 SW states. Data for the study were obtained by use of a questionnaire. Surveyed educators consisted of college and university department chairmen, secondary curriculum directors, and secondary instructors. The data were presented in such a manner to indicate opinions of the total group of respondents as well as those of each of the 3 categories. HE and PE are related historically and are substantially related at the current time,

and specialization in teacher preparation and instruction in each area is desirable.

189. MASS, Sonia H. A study of the cardiovascular training effects of aerobic dance instruction among college age females. M.S. in Physical Education, 1975. 57 p. (R. Patton)

Jacki Sorensen, the founder of aerobic dance, claims that aerobic dance will train the cardiovascular system. College females (N=31) enrolled in aerobic dance conditioning classes were used to determine if aerobic dance is sufficiently vigorous to elicit a HR capable of producing a training effect and to determine whether a training effect HR level is maintained. The Narcobiosystems telemetry monitored HR during 1 aerobic dance at 3 trials. To determine fitness levels, 12 min run/walk pretests and posttests were given. ANOVA and correlated t-tests indicate that aerobic dance, if properly taught, may be an effective cardiovascular training program. Resting HR decreased, fitness levels improved, and training intensity HRs were elicited and maintained at each trial.

190. PULLIAM, Janet M. The relationship of personality to the selection of a required physical education activity by college women. M.S. in Physical Education, 1975. 50 p. (I. Caton)

This investigation studied the relationship between personality and the selection of a required PE activity. Fr. women (N=107) enrolled in activity classes at North Texas State University, 1974-75 were given the Cattell 16 PF, Form A and an information sheet. An ANOVA and Duncan's multiple range test revealed no significant relationship between personality and the selection of specific physical activities.

191. SWINDELL, Carl L. The status of head baseball coaches in the Dallas-Fort Worth Metroplex in regard to the professional preparation standards for coaches as set forth by the American Association for Health, Physical Education and Recreation. M.S. in Physical Education, 1975. 68 p. (J. Watson)

Interviews with 48 varsity baseball coaches of the University Interscholastic League HSs within the Dallas-Forth Worth metroplex indicated that overall the coaches were found to be a highly qualified group of physical educators. Findings of the study included data on the playing experience, coaching experience, and educational backgrounds of the coaches. PE/coaching areas investigated included: (1) medical-legal, (2) sociological and psychological, (3) kinesiological, (4) physiological, and (5) theory and techniques of coaching. Recommendations included continued professional involvement of coaches, further studies

on professional preparation, a course in legal liability and implementation of a "coaching endorsement".

NORTHERN ILLINOIS UNIVERSITY (M. JOAN POPP)
DE KALB, ILLINOIS

192. WHITEMAN, Erlyne F. A historical study of Hebrew dance from its beginning to 70 A.D. with implications for use in education. M.S. in Education, 1975. 80 p. (M. Joan Popp)

Since the dance of the ancient Hebrews through 70 A.D. was essentially sacred in character, this study provides the educator with an important link to the understanding of why man dances. Review of literature included completed works in dance history relative to the early Hebrews, as well as related areas in Jewish history, music, worship and ritual. Reference works included Jewish encyclopedias, dictionaries and archeological studies. Criticism of primary and secondary source materials consisted of determining the external and internal validity. Methodology involved coordinating the information, analyzing the data, forming conclusions and making suggestions for its use in education. Hebrew dances may be categorized as festivals, ecstatic events, victory celebrations, processionals, worship services and social situations. These dances were performed by men and women separately and on over 12 different occasions. They were essential religions and often borrowed from neighboring countries. Movements were simple and dignified with occasional leaps and ecstatic gestures. This information may afford educators content for studying history and its cultural counterparts.

THE OHIO STATE UNIVERSITY (SEYMOUR KLEINMAN)
COLUMBUS, OHIO

193. ACANFORA, Gennaro. An inservice education needs assessment of Ohio elementary and secondary school physical educators. Ph.D. in Physical Education, 1975. 267 p. (C. Mand)

194. ALTHAUS, Ruth Ann. Women's health care and health education: A survey of women in selected YWCA's. Ph.D. in Health Education, 1975. (M. Beyrer)

195. BECHER, Bruce. The influence of interscholastic athletics on the academic achievement and social behavior of selected eighth grade students at Hawthorne Junior High School. Ph.D. in Physical Education, 1974. (C. Mand)

196. BENNETT, Jeanine. Sport fans and others: A comparison of personality characteristics of sport fans who attend professional games with persons with religious attendance and persons who indicate no formal social affiliations. Ph.D. in Physical Education, 1975. 101 p. (B. Nelson)

197. COHEN, Kenneth. Metabolic alterations with sprint versus endurance interval training in females. Ph.D. in Physical Education, 1975. (E. Fox)

198. Daniels, Rose L. A quantitative review of health education thesis and dissertation abstracts, 1970 through 1973, and a critical analysis of the dissertation abstracts. Ph.D. in Health Education, 1975. 228 p. (M. Beyrer)

199. DODDS, Patti. A behavioral, competency-based peer assessment model for student teaching supervision in elementary physical education. Ph.D. in Physical Education, 1975. 278 p. (D. Siedentop)

200. DUDLEY, Gary. The effectiveness of the Dyna Gym Corporation's recommended exercise program. M.A. in Physical Education, 1975. 27 p. (D. Mathews)

201. GILBERT, Glen. The evaluation of simulation for skill testing in the American National Red Cross First Aid and Personal Safety Course. Ph.D. in Health Education, 1975. (M. Beyrer)

202. HORNE, Thomas F. An analysis of procedures for developing and conducting college and university scuba diving programs. Ph.D. in Physical Education, 1975. 144 p. (R. Bartels)

203. HUTSLAR, John. Social factors influencing superior male bowling. Ph.D. in Physical Education, 1975. 210 p. (S. Kleinman)

204. LINTNER, Marie. Arthur S. Daniels: From student to dean, a biographical study. Ph.D. in Physical Education, 1975. 276 p. (B. Bennett)

205. LOOVIS, Michael. Model for individualized physical education experiences for the preschool moderately retarded child. Ph.D. in Physical Education, 1975. 342 p. (W. Ersing)

206. MC KENZIE, Donald. Cardiorespiratory and metabolic responses to selective arm or leg training. Ph.D. in Physical Education, 1975. (E. Fox)

207. RIDINGER, Rhonda. Chronic intensive physical training and cardiac function in female swimmers. Ph.D. in Physical Education, 1975. (E. Fox)

208. SHANNON, Ella. The life and professional contributions of Elmer D. Mitchell to American physical education and sport. Ph.D. in Physical Education, 1975. 290 p. (B. Bennett)

209. STEINMETZ, C. William. Cardiac function in male age group swimmers. Ph.D. in physical education, 1975. (E. Fox)

210. TOOHEY, Dawn. Basketball, its dramatic ritual, ceremonies and social function. Ph.D. in Physical Education, 1975. (S. Kleinman)

211. YEAKLE, Myrna. The effect of a non-simulation game on college students' ability to identify persuasion techniques employed in advertising of health products: A pilot study. Ph.D. in Health Education, 1975. (M. Beyrer)

OKLAHOMA STATE UNIVERSITY (AIX B. HARRISON)
STILLWATER, OKLAHOMA

212. ARRINGTON, Alfred. An evaluation of the physical education programs for men in state supported four year coeducational colleges and universities of Mississippi. Ed.D., 1975. 197 p. (A. B. Harrison)

The author evaluated 7 Miss. colleges using the Neilson-Comer-Griffin score card and found that 5 schools were rated as excellent (90-100%) while 2 schools were rated as good (80-89%). The schools rated compared favorably to schools previously evaluated by the same score card in Texas, Colorado, North Carolina, Missouri and the Western Athletic Conference.

213. HUNDLEY, Charles, H. A comparison among three submaximal step tests for predicting maximal oxygen intake. Ed.D. 1975. 84 p. (A. B. Harrison)

Oklahoma State University male students (N=36) took the Michael-Adams 1 min step test, the Ohio State University Step Test and the Lewis Progressive Step Test (Okla. State). Scores on these 3 tests were correlated with max $\dot{V}O_2$ as measured by open circuit method. The Lewis test had an r of -.77 with the criterion and a reliability of .94. The Michael-Adams Test had an r of -.44 with the criterion and a reliability of .77. It was concluded that the Lewis Test was the best one for predicting max $\dot{V}O_2$.

214. SANDERS, Tom R. The effects of a program of progressive resistance exercise on strength, muscle girth and body composition in college women. Ed.D., 1975. 84 p. (A. B. Harrison)

Ss were 52 college women at OSU. The exp. group (N=32) participated in a 10 wk program of progressive resistance on the universal gym 3 times/wk with the intensity of the workloads being increased 3 times during the study. Ss were pre and posttested on 8 cable tension strength tests, muscle girth at 7 sites and skinfold thickness at 5 sites. t's indicated significant ($p < .05$) increases in strength on 6 of 8 tests within the exp. group. Only 1 strength measure increased significantly in the control group (N=20). ANCOVA indicated a significant difference between control and exp. groups on posttest strength scores in elbow flexion, knee extension, and shoulder horizontal adduction. Progressive wt. training in these Ss increased strength but did not affect muscle girth or skinfold fat.

215. WOHLERT, Harry. The assessment of cardiovascular fitness through analysis of the left ventricular time components. Ed.D., 1975. 195 p. (A. B. Harrison)

Data were obtained on 41 male, middle aged faculty members at OSU. Left ventricular time components were determined from simultaneously recorded EKG, phonocardiogram and carotid pulse waves. Records were made at rest and at 1 and 5 min after a treadmill stress test exercise. The following intervals (HR, tension period, ejection period, electromechanical lag, isovolumetric contraction time, EP/ICP, EP/TP, EP/HR) were determined and correlated with 14 fitness variables. The resting intervals and ratios had only low correlations with the fitness variables with the exception of EP/HR which had a significant ($p < .05$) r. ANOVA revealed significant differences between exercisers and non-exercisers on all ratios. The 1 and 5 min post exercise intervals and ratios showed higher r's with the fitness variables than did the resting intervals. The 5 min post exercise relationships, while statistically significant ($p < .05$), were too low to be of predictive value. The difference in the intervals from rest to post exercise indicated no significant or discriminating power between levels of fitness.

OLD DOMINION UNIVERSITY (MELVIN H. WILLIAMS)
NORFOLK, UNIVERSITY

216. SACHON, Barbara B. The effect of iron supplementation on the endurance capacity of the female college athlete. M.S. in Education, 1975. 57 p. (M. Williams)

Female college athletes (N=19) performed a 500 yd freestyle

swim as a performance measure. Based on times of an initial performance test, 2 groups were formed. In a double-blind placebo exp., the exp. group received 324 mg of ferrous sulfate and the placebo group received 324 mg of lactose in capsule form. Both groups took one unit daily for a period of 28 days. A subgroup of 12 Ss consented to venipuncture for blood analysis. Six of these Ss were in the iron supplement group and 6 in the placebo group. Venipuncture was performed twice, both times immediately prior to endurance testing. A blood analysis of white blood cell count, red blood cell count, hemoglobin and hematocrit was done. After a 28 day period, Ss were retested on the 500 yd swim. Within the limitations of this study, it was found that iron supplementation had no effect on endurance capacity.

217. TENCH, Jesse L. Jr. Construction of swimming proficiency tests for university men and women. M.S. in Education, 1974. 78 p. (C. Jackson)

A 15 item exp. test battery was refined and administered to 108 men and 65 women enrolled in swimming classes at Old Dominion University. The 5 proficiency levels tested were beginning, intermediate, sr. life saving, water safety instructor and advanced swimmers. The data for each S were transformed into standard Sigma scores and summed to obtain a composite swimming proficiency score. Using stepwise multiple regression, separate 4 item regression equations were established for men (r = .9821) and women (r = .9807). Norms were constructed for each of the 5 proficiency levels.

PURDUE UNIVERSITY (C. J. WIDULE)
WEST LAFAYETTE, INDIANA

218. STILES, David B. Comparison of self estimated height and width of children 6 years and ten months to ten years and nine months under static and dynamic conditions. M.S. in Physical Education, 1975. 91 p. (H. M. Smith)

A film technique was developed to obtain estimates of children's body sizes during static and dynamic conditions. Forty children 6.10- to 10.10-yrs-old estimated their ht and shoulder widths while viewing life-size projected images of themselves in 3 conditions—static, dynamic, and stop action of the dynamic condition. The condition films depicted the projected image of the child from 6 in. below to 6 in. above his or her actual ht. The child responded by stopping a remote controlled projector when the projected image was perceived to be the correct body size. A nested factorial design was utilized to determine significant (.05 level) main effects of age, sex, condition and mode (direction of trials). A paired difference test indicated

whether the children's estimates were in fact significantly different from the actual body dimension. The data analysis revealed no significant differences in main effects of age or sex. However, interaction of the stop action condition with age and sex resulted in significant differences between age group I boys, age group II boys and girls with the remaining subgroups. The stop action width estimation error was greater than any other condition and interaction. Findings for ht estimation resulted in significant differences between perceived body size under static conditions and perceived body size under dynamic conditions.

219. VERDUZCO, Roger. Relationships among the motor, intellectual and personality domains of development in preadolescent educationally subnormal children. Ph.D. in Physical Education, 1975. 274 p.

Univariate and multivariate statistical approaches were used to determine the relationships among motor, intellectual, and personality domains associated with preadolescent retarded children and to test the difference between the $\bar{X}$s and $\bar{X}$ vectors of motor and personality variables associated with boys versus girls, and blacks versus whites. Data were collected from 115 Ss with IQ scores between 45 and 90 and academic achievement scores between 0 and 7 grade equivalents. The Ss consisted of 55 girls and 60 boys (63 blacks and 52 whites). The data consisted of the following variables: 15 perceptual and motor, 13 personality, 10 intellectual as well as age, ht., and wt. The structural relationships were obtained by factor analysis and the degree of relationships were determined by canonical cal correlation. Both the factor analysis and canonical correlation showed a significant relationship ($p < .01$) between the motor perceptual, intellectual and personality variables. Using the univariate t-test and multivariate discriminant function analysis, there were significant differences between $\bar{X}$s and $\bar{X}$ vectors ($p < .01$) for blacks and whites and for boys and girls ($p < .05$).

SAM HOUSTON STATE UNIVERSITY (V. L. ESTRIDGE)
HUNTSVILLE, TEXAS

220. WATZ, Karyl A. Kinesthetic ability as related to a ball catching task with dominant and non-dominant hands. M.S. in Physical Education, 1976. (V. L. Eskridge)

Ball catching ability of HS girls (N=160) was tested using either their dominant or non-dominant hand when they were unable to see their arm and hand. An "L" shaped curtain was used which contained a circular target hole allowing a thrown ball to pass through. The side of the curtain contained an arm sleeve which allowed the S to see the ball in its parabolic

flight pattern but did not allow the S to see either her arm or hand. Ss were assigned to dominant or non-dominant hand kinesthetic or visual catching groups. There were significant differences between vision/kinesthesis and dominant/non-dominant hands in the ball catching task (F test). However, a t-test revealed no significant difference between dominant/non-dominant visual hand catching ability. It appears that Ss do not differ in the spatial orientation of the hand and arm in visual or kinesthetic catching. However, observing the ball until it hits the hand is necessary for the temporal orientation of the hand in catching.

SMITH COLLEGE (P. DOWNIE)
NORTHHAMPTON, MASSACHUSETTS

221. BARRY, Lynn E. The fulfillment of man's Dionysian and and Apollinian natures through Sikhism and Kundalini Yoga. M.S. in Physical Education, 1975. 90 p. (J. A. Mott)

A philosophical study of the application of Sikhism and Kundalini Yoga, as practiced by members of 3HO, to the Greek Ideal, with implications for curricula in PE.

222. BREDEMEIER, Brenda Jo. The construction of an inventory to assess reactive and instrumental aggression in female athletes. M.S. in Physical Education, 1975. 169 p. (M. R. Morgan)

The Bredemeir Athletic Aggression Inventory (BAAGI) consisting of 200 items was developed and then, with the Buss Durkee Hostility Scale, and the Crowne Marlowe Social Desirability Scale, administered to 166 intercollegiate female athletes in 5 New England states. The athletes represented 6 sports: badminton, basketball, fencing, gymnastics, squash and swimming. Coaches completed descriptive evaluations of 146 of the participants. Validation procedures included analysis of data collected from administered instruments, an intercorrelation matrix and judges' ratings. A purified version of the BAAGI contained 50 reactive and 50 instrumental items.

223. BRUNNER, Ann. A philosophic inquiry into a holistic approach to human movement from the perspective of Zen. M.S. in Physical Education, 1975. 75 p. (P. D. Downie)

A study of the potential role of Eastern movement forms and philosophy in traditional PE programs.

224. CLARK, Nancy D. Merce Cunningham's contribution to choreography and the development of an original dance using three of his tenets. M.S. in Physical Education, 1975. 65 p. (M. R. Morgan)

Following identification of the principles involved in

Cunningham's choreography, a dance was developed around the independence of the music and the dance, the development of a theme from movement rather than from an emotion or a literal idea, and the inclusion of silence and suggestions of stillness. The performance was evaluated by 6 dance educators.

225. COBURN, Deborah K. A case study: Participation in movement experiences by two minimally brain damaged children. M.S. in Physical Education, 1975. 63 p. (P. D. Downie)
A movement experience program designed for 2 children at the Phelz Diagnostic Day School in Dayton, N.J. A description of the movement lessons and evaluation of each child's performance in the program is included.

226. DEWAR, K. Patricia. Sacred space in ritual dance (as illustrated in the sun and ghost dance of the American Plains Indian and the American Shaker dance). M.S. in Physical Education, 1975. 86 p. (M. R. Morgan)
A study focusing on the circle concepts of center, sacred space and circumference as the dance form symbolically portrayed each society's need for protection and renewal.

227. HOLTON, Constance K. Choreography and stage design as manifest in the creativity of Diaghilev, Graham and Nikolais. M.S. in Physical Education, 1975. 93 p. (P. D. Downie)
A study of the impact of each choreographer on the performing arts of the time.

228. PRICE, Rebecca B. Analysis of the differential levels of creativity expressed by young children in ballet and modern dance. M.S. in Physical Education, 1975. 44 p. (M. R. Morgan)
Hoefner's Test for Creative Potential was administered to 60 girls, 9-to 11-yrs-old who were participating in the 2 types of dance classes. ANOVA revealed $p > .05$ between the 2 groups.

229. RESCH, Rosalie M. A comparison of the Soviet GTO and AAHPER youth fitness test: Backgrounds, origins and components tested. M.S. in Physical Education, 1975. 97 p. (P. D. Downie)
The recommended HE and PE curriculum established by the President's Council on P.F. and S. formed the bases for comparison of the two tests. The most recent revision of the Soviet GTO (1972) was completely translated by the author and appears in the Appendix.

230. SCHEIBNER, Catharine. Interscholastic athletic programs for boys and girls in Massachusetts secondary schools. M.S. in Physical Education, 1975. 122 p. (J. A. Mott)
Two questionnaires were developed and forwarded to 408 athletic directors and 816 coaches in Mass. secondary schools with grades 9–12. 24% of the ADs and 15% of the coaches returned the questionnaires. Following ANOVA and application of the Scheffé procedure, it was found that sex discrimination existed in the breadth of the programs offered, financial support for the programs and coaches' salaries. Both Title IX and ch. 622 regulations were being violated especially in girls' programs. In addition, attitudes of ADs and coaches and male and female coaches differed significantly. The study was supported by the Mass. Department of Education.

231. SHANER, Janet Petrilla. The history and development of the International Federation of Women's Hockey Associations. M.S. in Physical Education, 1975. 206 p. (M. R. Morgan)
An account of the changes in administration and membership of the IFWHA since 1927.

232. STONE, Henri K. Effects of Kundalini yoga practice on POI and STAI responses of college students. M. S. in Physical Education, 1975. 43 p. (J. A. Mott)
63 male and female students participating in 2 Yoga classes were administered the Shostrum POI and Spielberger STAI. Following ANOVA, greater self acceptance and reduction in state and trait anxiety levels was found at $p < .01$.

SOUTH DAKOTA STATE UNIVERSITY (N. W. HATTLESTAD)
BROOKINGS, SOUTH DAKOTA

233. DOHRER, Richard. A study of selected objective factors in college basketball and their relationship to team success. M.S. in Physical Education, 1974. 62 p. (P. Brynteson)

234. EGGE, James. The probability of a basketball rebounding in specific areas afer a missed shot is taken from a certain area. M.S. in Physical Education, 1974. 34 p. (P. Brynteson)

235. ENGELS, Michael. Effects of self-hypnosis training sessions on pre-competition anxiety levels of collegiate wrestlers. M.S. in Physical Education, 1975. 44 p. (G. Robinson)

236. ERICKSON, Bradley. Relationships of scores achieved on a crawl stroke rating form and selected measures of stroke efficiency in swimming. M.S. in Physical Education, 1975. 53 p. (N. Hattlestad)

237. FLICS, Cindy. Accuracy of college women shooting set shots as affected by selected training programs. M.S. in Physical Education, 1974. 45 p. (P. Brynteson)

238. HALVERSON, Barbara. The construction of a racquetball skills test battery for beginning college women. M.S. in Physical Education, 1975. 52 p. (G. Robinson)

239. HOHG, Robert. The effects of two adhesive ankle taping techniques upon selected motor abilities and ankle flexibility. M.S. in Physical Education, 1974. 59 p. (P. Brynteson)

240. KOCH, James. Status and reflections of South Dakota State University lettermen. M.S. in Physical Education, 1974. 118 p. (G. Robinson)

241. LANGEMO, Barbara. Relationship between pre-meet anxiety level and gymnastic meet performance in women's intercollegiate gymnastics. M.S. in Physical Education, 1974. 33 p. (G. Robinson)

242. LANGEMO, Lawrence. The relationship of selected objective factors to team success in college football. M.S. in Physical Education, 1974. 77 p. (G. Robinson)

243. SCHWAN, Karen. Effects of selected physical traits on the layout and vertical vaults of women intercollegiate gymnasts. M.S. in Physical Education, 1975. 36 p. (N. Hattlestad)

244. SUTTON, Keith. The relationship of freestyle sprinting ability in swimming to selected measurable traits. M.S. in Physical Education, 1975. 61 p. (G. Robinson)

245. TAYLOR, Radford. Effects of different drills upon the improvement of agility of football players. M.S. in Physical Education, 1974. 64 p. (P. Brynteson)

246. VAN BERKUM, Dennis. Selected traits for predicting success in football as determined by college football coaches. M.S. in Physical Education, 1975. 41 p. (N. Hattlestad)

SOUTHEAST MISSOURI STATE COLLEGE (R. F. KIRBY)
CAPE GIRARDEAU, MISSOURI

247. VOEWERK, Leo F. A study to determine the influence of throwing skills on the subsequent learning of the service in tennis. M.A.T. in Physical Education, 1975. 40 p. (R. F. Kirby)

This study determined whether the achievement of tennis service skills by 10-, 11-, and 12-yr-old boys is affected by their skill ability in throwing. Boys (N=21) in the Cape Girardeau City Recreation Tennis Porgram were given the AAHPER Softball Throw for Accuracy Test and Hewitt's Service Placement and Speed of Service Tests. They were then given 4 periods of instruction on the tennis service followed by Hewitt's 2 service tests. A significant difference in the $\bar{X}$ scores between the tennis service pretest and posttests was not found for the low skill group but was found for the high skill group. A significant difference in tennis service achievement of boys with high softball throwing skills and boys with low skills was found. The tennis service ability of the Ss in this study was directly related to their throwing skills.

SOUTHERN ILLINOIS UNIVERSITY (R. KNOWLTON)
CARBONDALE, ILLINOIS

248. KOLLER, Ann Marie. The effect of a selected weight training program upon the muscular strength of college women. M.S. in Physical Education, 1975. 193 p.

College women (N=27) participated in a selected wt training program and performed a 10 RM workload on the forearm curl, triceps extension, and bench press. While significant decreases in skinfold of the upper arm were observed, significant increases in upper arm girth and lower arm girth were also observed. Ss increased significantly ($p < .001$) in strength as measured by the 1 RM and 10 RM in all 3 exercises performed.

249. SHELTON, Linad Rae. A program of self-instruction for the running long jump. M.S. in Physical Education, 1975. 193 p. (J. L. Thorpe)

College women (N=12) from PE classes were divided into exp. and control groups to compare the effectiveness of a written program of self-instruction with that of the traditional methods of instruction for the running long jump. Analyses of favorable and unfavorable comments, lengths of jumps, and ranks of best jumps by methods indicated that the exp. group performed better than the control group. All of the Ss in the programmed instructional group believed that the learning gained through the use of the programmed text was the better way to learn when compared to the traditional method of instruction.

250. SWINT, Betty J. The construction of a test for the serve in table tennis. M.S. in Physical Education, 1975. 137 p. (C. West)
A skill test for the serve in table tennis was constructed and administered to 25 members of a table tennis club conducted at SIU, Carbondale. Ropes were used to assess vertical ht. of the ball as it passed over the net. This measure, combined with horizontal distance and the use of velocity tables, provided a velocity score for each serve. A plastic overlay provided a measure of accuracy when placed over a scaled replica of the table on which contact and landing points were indicated. Ss performed 10 serves on each of 2 days. Results of the analysis of data indicated that the test was not an objective, reliable or valid measure of serving performance.

SPRINGFIELD COLLEGE (WILLIAM J. SULLIVAN)
SPRINGFIELD, MASSACHUSETTS

251. ALLEN, David B. A comparison of two types of turns in breaststroke swimming. M.S. in Physical Education, 1974. 24 p. (W. Sullivan)
The Ss (N=10) for this study were varsity college swimmers who were timed by cinematographic methods while swimming the breaststroke and using both the flip turn and the open turn. Analysis by a repeated measures t-test showed that the flip turn was significantly faster ($p < .05$) than the open turn.

252. BOYER, Jeremy K. A comparison of academic achievement and perceptions of black and white basketball players in Maryland community colleges. M.S. in Physical Education, 1974. 52 p. (J. Parks)
Ss for this study were 177 male basketball players from a community college in Md. GPAs for all S were obtained as well as a questionnaire which was administered to each S. Utilizing the t-test and X^2 several comparisons were made between white and black players. It was found that the black players had significantly lower ($p < .05$) GPAs than the white players. There was no difference ($p > .05$) between whites and blacks relative to their perception of existing prejudice.

253. CARGILL, Robert W. Jr. A mechanical analysis of a near end stoop vault executed on the long horse. M.S. in Physical Education, 1975. 51 p. (W. Sullivan)
Ss for this study were 3 Springfield College gymnastic team members. Each S performed the near end stoop vault 6 times while being filmed and was rated by 3 nationally rated gymnastic judges. Chosen for analysis were the best and poorest vaults for each of the 3 Ss, with 42 measurements taken on each of the 6 vaults. Comparisons were made on the X scores of each

of the 42 measurements between the best and poorest vaults of each S and between the overall best vault and the overall poorest vault. It was concluded that the most successful near end stoop vaults show the greatest velocity of approach, greater range of movement of the center of gravity during board contact, and a more direct path of the center of gravity from the board contact to the initial hand contact. Hand contact upon the horse in the most successful near end stoop vaults serves to decrease forward velocity.

254. CECIL, Alfred T. A study to determine the relationships of stance and length of stride to bat swing velocity. M.S. in Physical Education, 1975. 41 p. (W. Sullivan)

Ss for this study were 10 HS JV players. Each S was tested for bat swing velocity under 9 conditions resulting from the factorial arrangement of 2 factors, each at 3 levels. The 2 factors were stride length (long, medium and short) and stride direction (open, square and closed). The exp. design was a 3 X 3 with repeated measures. ANOVA showed that the only significant ($p < .05$) effect was for stride length. Further analysis by Duncan's multiple range test showed that bat swing velocity increased significantly ($p < .05$) as the length of the stride increased.

255. ERSING, Carl A. A study of the professional life of Lawrence E. Briggs. M.S. in Physical Education, 1975. 104 p. (J. Genasci)

Data for this study were obtained through the documentary approach and the survey method. After the data were collected and critically examined, the organization was accomplished. The categories included Briggs' involvement in soccer and other areas such as teaching and related pursuits. It was found that Briggs' contributions to soccer and to the University of Mass. were extensive.

256. FERRELL, Georgia D. The effect of concurrent auditory feedback on pacing performance of a total body motor pattern. D.P.E., 1975. 74 p. (B. Jensen)

Female students (N=27) at Ursinus College were randomly assigned to 3 groups: regular and constant concurrent feedback cue, regular but intermittant feedback cue, and a control group. All Ss were given a pretest, 2 tests after practice on task one, and a final test on a second task. The criterion scores were measures of accuracy in pacing performance. The exp. design was a 3 X 4 with repeated measures on the second factor. Analysis showed $p < .05$ among the levels of feedback cues but $p > .05$ between the pretest scores and the other 3 scores. It was concluded that pacing accuracy, once learned, transfers to a second task.

257. FREAS, Samuel James. A study of selected variables in predicting water polo players' ability. M.S. in Physical Education, 1975. 40 p. (E. Bilik)
College water polo club players (N=28) were administered 10 tests of water polo playing ability: speed, agility, endurance, distance throw right and left, target right and left, dribble, ball handling and ht out of the water. Also, a panel of 10 experts rated and ranked each S on his water polo playing ability. Analysis was by zero-order and multiple correlation and regression techniques. An r of .92 was obtained between the criterion (expert's rankings) and the 4 independent variables of throw right for distance, throw left for distance, target right, and ball handling. The regression equation was: Water polo Ability = .629 (throw right for distance) - .630 (throw left for distance) - .522 (target right) + .936 (ball handling) + .290.

258. FU, Frank H. The effects of physical training on the postnatal growth of the lung. D.P.E., 1975. 103 p. (W. Sinning).
The effect of swimming exercise in the postnatal growth of the lungs was examined in 60 Charles River Outbred Albino male rats during their 2nd and 3rd mo of life. A 2 X 3 factorial ANOVA was used to test for differences due to intensity of exercise (exhaustion, 5 min, and no exercise) and duration of training (4 wks and 8 wks). All rats were loaded equal to 5% of body wt while swimming. Measurements used to evaluate lung growth were lung blood volume, lung blood volume/lung wt, alveolar density, ratio of alveolar surface area to respiratory volume, lung wt, and lung wt/body wt. It was concluded that alveolar proliferation is increased in rats exposed to swimming during the 2nd mo of postnatal growth as indicated by greater alveolar densities and surface area to respiratory volume in exercised Ss. Failure to find further growth during the 3rd mo of life suggested a critical period prior to the 3rd mo for such proliferation. Non-exhaustive swimming was as effective as exhaustive swimming in promoting the proliferation. There was no interaction between intensity and duration of exercise.

259. HAMILTON, Wendell. A documentary study of physical education and athletics in the United States Virgin Islands from 1921 to 1974. M.S. in Physical Education, 1975. (J. Parks)
Data for this study were obtained from yearbooks, newspaper, annual reports, surveys, books, school laws, photographs, min of meetings and documents translated from Danish. Data were also obtained from questionnaires and personal interviews with named authorities. The paper was organized into 3 time periods:

early (1921-45), middle (1946-59) and current (1960-74). The author lists several implications and recommendations.

260. KOZLOW, Ronald. Manifest anxiety, agility and peer status of elementary school boys. M.S. in Physical Education, 1975. 47 p. (W. Sullivan)

Ss for this investigation were 60 5th and 6th grade boys. They were categorized as having high or low anxiety and high or low agility (Children's Revision From of the Taylor Manifest Anxiety Scale and AAHPER Youth Fitness Test). Ss (N=15) were categorized as high anxiety-high agility, 15 as high anxiety-low agility, 15 as low anxiety-high agility, and 15 as low anxiety-low agility. All Ss were then administered the Covell Personal Distance Rating scale The design was a 2 X 2 with independent groups and ANOVA was used to determine if there were significant differences between the levels of each factor (anxiety and agility). Anxiety level was not related to peer status but those possessing higher levels of agility were accepted to a greater extent by their peers than those who were low in agility.

261. LEMIEUX, Georges B. The effect of three selected techniques of the volleyball jump on height of jump. M.S. in Physical Education, 1975. 47 p. (B. Jensen)

Male PE student volunteers at a Canadian university (N=60) were pretested for vertical jumping, and 3 matched groups were formed. These groups were then randomly assigned to 1 of 3 jumping techniques: hop technique, step-close technique, and toes-toes technique. Each group trained with the assigned jumping technique for 15 days before taking a posttest. A treatments X levels ANOVA showed no differences among the jumping techniques and no interaction between jumping technique and level of ability.

262. LINDBERG, Gary D. The effects of isometric and isotonic exercise upon selected cardiac intervals. D.P.E., 1975. 161 p. (W. Sinning)

Time components of the left ventricular contraction cycle were studied in 12 males. Electromechanical lag, isometric contraction period, tension period, ejection period, and diastole were measured during isometric leg exercises against 10, 30, 50 and 75% of the max voluntary contraction and voluntary contraction and isotonic exercise with a bicycle at 150, 450, 750 and 1,050 kpm/min and during recovery. Exercise intensity differences were evaluated by ANOVA while effects due to kind of exercise were analyzed by regression analysis relating components to HR. Several findings were discussed.

263. MC CORMICK, James J. Status and scope of recreation services for handicapped children and youth in Rhode Island. D.P.E., 1975. 162 p. (J. Genasci)
This study compared the status and scope of recreation services for the handicapped in R.I. with the results of a similar nationwide study completed in 1971. Of 479 questionnaires sent, 221 agencies responded. It was concluded that the status of recreation services for the handicapped must be considered very limited. The scope of these services appears to be consistent with the scope of such services on the national level.

264. MC EVOY, Joseph E. Analysis of the individual medley swimming test. D.P.E., 1975, 186 p. (E. Seymour)
This study investigated the IMST as a test of swimming ability. Statistical analysis dealt with the validity, reliablity and objectivity of the IMST as well as the distances of the test, the influence of instruction and practice, the time for each stroke in the total performance, and the construction of norms. Ss were members of the men's varsity swimming team and students in beginning swimming courses at Springfield College. Data also were collected on college men at 2 other universities to establish norms. Analysis of the data indicated that the IMST is a valid, reliable, and objective test. It was also concluded that the IMST can be utilized in facilities which have not been built to standard recommended distances. Further, the 60 yd IMST may be regarded as the optimum distance for testing beginning swimming students.

265. MAGARIAN, Kenneth. The relationship of bat performance time to baseball batting ability. M.S. in Physical Education, 1975. 37 p. (W. Sullivan)
The Ss (N=51) for this investigation were varsity baseball players at 6 W. Mass. colleges. All Ss were measured for bat performance time: the time it took to react to a stimulus and swing a bat over a constant distance. Final season batting and slugging averages were also obtained for all Ss. Analysis showed all Pearson r's to be nonsignificant ($p > .05$) with the exception of batting and slugging average ($r = .63$).

266. MEYER, Faith J. Helen M. McKinstry, her professional life and contributions to physical education. D.P.E., 1975. (J. Parks)
Data were collected by questionnaire and interview as well as by historical method and were obtained from individuals who were associated with Helen McKinstry and from various media. Analysis of the data indicated that the S made a variety of contributions to PE and athletics for girls and women as well as to education outside of PE.

267. OLSON, Marjorie J. The effects of physical activity on the body image of nursing home residents. M.S. in Physical Education, 1975. 61 p. (B. Jensen)

Patients at a nursing home were placed in a control group (N=9, $\bar{X}$ age = 79.2) and in an exp. group (N=18, $\bar{X}$ age = 76.8). The exp. group engaged in a 15 session, 8 wk training period which consisted of slow stretch, rhythmic breathing, special and upright exercises. The control group met for 15 discussion sessions during the same 8 wk period. All Ss were pretested and posttested for body perception using the linear response methodology. ANCOVA showed $p > .05$ between the 2 groups for all of the body parts and nonbody objects measured

268. PICADO, Marta E. The effectiveness of physical education activities as a means of teaching academic concepts to third grade children. M.S. in Physical Education, 1975. 88 p. (B. Jensen)

Third graders were pretested by a 40 item test which covered 4 science concepts. An exp. group (N=10) was taught the science concepts using a PE approach. A control group (N=9) was taught using the regular classroom method. The teaching period was 8 days and each concept was taught twice, once in English and again in Spanish since the S were bilingual. ANCOVA showed that the gains made by the exp. group were significantly greater ($p < .05$) than the gains made by the controls.

269. REINHARDT, Paul T. A comparison of the accuracy of the one-handed and two-handed backhand tennis strokes. M.S. in Physical Education, 1975. 32 p. (J. Genasci)

Female university students (N=32) were administered the Broer-Miller Backhand Drive Test before and after a 7 wk instructional period. One-half of the Ss were taught and practiced the 2-handed backhand stroke while the rest utilized the 1-handed backhand stroke. Each group had a total of 14 class periods of 50 min each. A t-test showed no significant difference ($p > .05$) between the 2 groups.

270. SPEISER, Thomas R. A comparison of the linear velocity of the baseball in pitching from the wind-up position, stretch position and modified wind-up. M.S. in Physical Education, 1975. 43 p. (J. Parks)

Male fr. and varsity baseball pitchers (N=15) were tested for baseball throwing velocity under 3 different conditions: full wind-up, modified wind-up, and stretch position. A LOCAM camera set at 100 frames/sec was used to measure the velocity of each pitch. A repeated measures ANOVA showed nonsignificant differences ($p > .05$) among the 3 pitching positions.

271. WALDRON, Kathryn J. Perceptual-motor abilities of kindergarten children. M.S. in Physical Education, 1975. 113 p. (J. Genasci)
Kindergarten children who were evaluated by means of the Purdue Perceptual-Motor Survey as having perceptual difficulties (N=108) were randomly assigned to a perceptual-motor group, a PE group or a control group. The PM and PE groups engaged in 57 sessions over a 19 wk period. The PM program consisted of activities advocated by Barsch, Getman, Kephart, and others. ANCOVA and t-tests indicated that the PM program was the most effective in improving perceptual-motor ability.

272. WALL, Kenneth A. A cross-cultural comparison of personality traits of selected athletes in open or closed skilled sports. D.P.E., 1975. 137 p. (B. Jensen)
Ss (N=214) were varsity male athletes from Costa Rica, Springfield College, Caracas, Venequela, and were given the Cattell 16 PF. Results were analyzed by discriminant function analysis and stepwise discriminant function analysis. It was concluded that BB and soccer (open skilled sports) athletes exhibited similar personality profiles as did swimming, gymnastics, and track and field (closed skilled sports) athletes. When grouped according to countries (U.S., Venezuela, and Costa Rica), the personality profiles of the athletes differed. The personality profiles of athletes in closed skilled sports differed from those in open skilled sports for athletes in Coasta Rica and the U.S. although different factors were responsible for the discrimination in the 2 countries. There was no difference in the personality profiles of open and closed skilled sport athletes in Venezuela.

273. WILENSKY, Neil F. Racial attitudes of athletes and musicians of three socio-economic groups. D.P.E., 1975. 138 p. (E. Seymour)
Students (N=180) from 3 colleges of the City University of N.Y. were categorized by 3 factors: Racial group (Black & White); Organization group (Athlete, Muscian, & Non-participant); and Socio-economic group (High, Average & Low). All Ss were tested for racial attitudes through application of the Semantic differential. ANOVA revealed that $p > .05$ for differences among the levels of each factor and for interactions.

STANFORD UNIVERSITY (J. NIXON)
STANFORD, CALIFORNIA

274. NESS, R. Gary. A comparative study of the perceived stress of springboard diving by age and sex groups. Ph.D. in Education, 1975. 108 p. (J. Nixon)
Physiological (sweat prints), behavioral (latencies to act),

and phenomenological (self-reports) stress responses reflected Ss' perceptions of the stress of initial attempts to dive from each of 3 different hts. above the water (12 in, 1 m, and 3 m). Data gathered on 4 sample groups of 12 representing girls (ages 7 to 130, boys (ages 7 to 13, adult women and men were compared with a 3-way ANOVA test for each stress measures. Results showed significant ($p < .01$) increases in stress response with increases in ht. of the dive for all Ss, but the sequential order of attempts from each ht. did not alter the stress responses significantly. Female Ss showed significantly ($p < .01$) greater stress responses for all 3 measures. Although younger Ss hesitated longer, the differences in stress response by age were not significant ($p > .05$). For all Ss the behavioral and phenomenological responses correlated better ($r = .5+$) than either measure with the physiological response.

STATE UNIVERSITY COLLEGE AT BROCKPORT (M. L. PUTHOFF)
BROCKPORT, NEW YORK

275. RIED, Carol L. The effect of auditory cues on visually handicapped bowling performance. M.S. in Education, 1975. (R. French)

Visually handicapped Ss (15 congenital and 15 acquired) were randomly assigned to a sequence of bowling tasks involving bowling with and without an audible goal locater. Bowling performance was significantly superior with the utilization of the audible goal locater than without for all Ss. Further, bowling performance of the acquired visually handicapped was significantly superior to the bowling performance of the contenitally visually handicapped with and without the audible goal locater.

276. SCOTLAND, Bruce M. Strength, muscular endurance, and cardiorespiratory endurance changes in college men and women as a function of training. M.S. in Education, 1976. (L. G. Stewart)

The Ss, 12 males and 10 females, engaged in a 6 wk program of progressive resistance exercises using DeLorme's technique in order to increase their strength and muscular endurance, as well as an interval running program to develop cardiorespiratory endurance. Ss were pre and posttested for elbow flexion strength with Clarke's cable tensiometer. Muscular endurance was measured using Shaver's arm-lever ergometer method, and cardiorespiratory endurance according to the Astrand-Rhyming bicycle ergometer technique. While both men and women increased significantly in strength, muscular endurance, and cardiorespiratory endurance, there were no significant differences between the sexes on these parameters. However, absolute strength gains were found to be significantly greater in men than women.

277. SPRINGSTEEN, Jeffrey A. The effect of sex of audience on learning and performance of a complex motor skill. M.S. in Education, 1975. (T. McIntyre)
College fr. male Ss (N=120) were randomly assigned to 4 equal groups to determine the effects of an alone condition (without E present), a passive female, passive male, and passive mixed audience on learning; and performance of a complex motor skill. The 4 X 2 factorial design with repeated measures tested Zajonc's (1965) social facilitation theory and the effect of sex on audience on learning and performance of the Minnesota Rate of Manipulation-Turning Test. Each S performed 6 trials with the first 3 trials designated as the learning phase and trials 4-6 designated at the performance phase. Scoring for each trial was based on the amount of time it took Ss to complete the skill. Analysis of data supported social facilitation theory, but the effect of sex of audience observing the complex task was limited. There was no effect on learning; however, a passive female audience significantly increased performance when compared to a passive male and mixed audiences. Results and discussion centered on inadequate measures of habit hierarchies, no measure of arousal, and alternative explanations.

STATE UNIVERSITY OF NEW YORK AT BUFFALO (C. R. MEYERS) BUFFALO, NEW YORK

278. VENTURA, Marlene R. Creative thinking and related social behaviors of students in different nursing education programs. Ed.D. in Health Education, 1975. 148 p. (C. Meyers)
This study compared creative thinking abilities and related social behaviors between nursing students enrolled in their last yr of study in diploma, associate degree, and baccalaureate degree schools in the western N.Y. area. These students (N=344) completed the Torrance Tests of Creative Thinking and the California Psychological Inventory. Data were analyzed by one-way ANOVA and regression analysis techniques. Significant differences ($p < .05$) were found on all creativity measures except for verbal flexibility and figural originality and on 7 social behavioral variables. It was difficult to predict satisfactorily how nursing students from different programs performed on creativity measures utilizing their scores on Class III and IV measures of the CPI, but some relationships were found for certain programs.

STATE UNIVERSITY OF NEW YORK AT CORTLAND (W. J. TOMIK)
CORTLAND, NEW YORK

279. TULLY, Michael J. Effects of moderate and heavy warm-up on rectal and skin temperatures during subsequent near-maximal exercise. M.S. in Physical Education, 1975. (W. J. Tomik)

College males (N=7) were pretested to determine warm-up intensities and speed of test run. Each S was tested on 3 separate days following 3 levels of warm-up. Criterion variables monitored were Rectal (T_R) and Skin (T_S) temperatures on anterior and posterior thigh. Data were analyzed graphically. Final T_R at end of run was higher when preceeded by both moderate and heavy warm-up. Rate of increase of T_R did not differ between warm-up and no warm-up. Moderate and heavy warm-up did not show T_R or T_S differences during run. Skin temperatures during run did not differ between warm-up and control.

SYRACUSE UNIVERSITY (P. CATALDI)
SYRACUSE, NEW YORK

280. APGAR, Fred M. A study of the emphasis placed on winning, as a dimension of interscholastic athletics, by male high school students. Ed.D. in Physical Education, 1975. 136 p. (E. Milner)

This research was undertaken to place in perspective the widespread charges that an overemphasis on winning dominates HS athletics. Kenyon's Attitude Toward Physical Activity Inventory was modified to include the Pursuit of Victory as a dimension of interscholastic athletics. The instrument was administered to 341 randomly selected male SHS students from 9 central N.Y. HSs. Factor analysis and split-half reliability techniques yielded satisfactory validity and reliability measures for the instrument. Data were analyzed by ANOVA, t-tests, multiple discriminant function analysis, and Scheffé tests. Male HS students did not place a greater emphasis on winning than on all the other dimensions of interscholastic athletics. The relatively low rank order of the winning dimension (6th out of 8), refuted, in part, critics' charges that winning dominated HS athletics. Athletes placed greater emphasis on winning than did non athletes, but no difference in attitude toward winning existed according to the type of activity pursued (team vs. individual sports).

281. PRATO, Douglas J. The effects of three terminal augmented feedback conditions upon the acquisition of motor skill in bowling. Ed.D. in Physical Education and Educational Administration, 1975. 130 p. (T. Gilliam)

Ss were 66 male and female beginning bowlers (undergraduates)

randomly assigned to 1 of 3 exp. treatments and a control condition based on a bowling pretest. S in each treatment received 3 min of feedback for 1 frame of bowling 2 times/wk for 14 wks. ANCOVA of posttest scores using pretest scores as covariates revealed no significant differences in overall improvement in bowling at the .05 level among the 4 groups. A repeated measures ANOVA of $\bar{X}$ scores of 4 successive 3 wk periods indicated no significant differences in the rate of skill acquisition. After initial exposure of S to instruction, enough feedback appeared to be inherent in the task to permit improvement through practice alone. Terminal augmented feedback in the form of a videotape model presentation with teacher comments, self-viewing VTR with teacher comments, teacher comments only, or no terminal augmented feedback did not appear to affect bowling skill.

TEXAS A&M UNIVERSITY (L. J. DOWELL)
COLLEGE STATION, TEXAS

282. CRENWELGE, Terry A. A comparison of the self-concept and body-cathexis of selected high school students of high and low cardiovascular fitness. M.S. in Physical Education, 1974. 67 p. (H. Tolson)

Male HS students (N=132) were divided into 2 groups: those who ranked in the top 25% on Cooper's 12 min run and those who ranked in the bottom 25%. All Ss took Bills' Index of Adjustment and Values, and Secord and Jourard's Body-Cathexis Scale. Students of high and low cardiovascular fitness do not differ in self-concept or body-cathexis. Disregarding fitness levels, a positive r exists between self-concept and body-cathexis; however, the magnitude of the coefficient of determination between self-concept and body-cathexis negates prediction.

283. DUDLEY, Patrick H. The effects of cryotherapy and static stretching on residual muscle tension as determined by electromyography. Ph.D. in Physical Education, 1975. 88 p. (C. W. Dandiss)

College student volunteers (N=60) were arranged from low to high on maximal strength scores and divided by chance into 3 groups: cryotherapy; static stretching; and control. Ss had 1 leg serve as the treatment leg and 1 leg the non-treatment leg. The control group was included to evaluate the crossover effect. Muscle tension was measured in the gastroc-soleus muscle group by EMG and then each S was given exercise bouts of rising on toes holding 50 pounds of wt. After exercise Ss were administered treatments. Crotherapy treatment consisted of 15 min immersion of the treatment leg in cold water 11° to 12° C. Static stretching treatment was 2 2-min stretches with 1-min

rest between. Ss returned in 48 hr. for post-treatment EMG measures. Cryotherapy and static stretching were effective in reduction of residual muscle tension but there was no difference between the 2 treatments. There is a cross-over effect from both treatments.

284. HEPLER, Susanne E. Bilingual drug abuse communication. Ph.D. in Allied Health, 1975. 137 p. (C. W. Landiss)

Bilingual written and audio-visual materials were developed and selection of treatment sites was made with the help of an advisory group. Audiovisual materials were presented at community centers in 1 sector of Harris county and distribution of written materials was made to community centers in another sector. The control sector did not receive either presentation. Comparison of Mexican-American intakes into treatment programs indicated that both treatment sectors produced significant increases but audiovisual treatments were more productive than written treatments.

285. KAHLER, William V. An historical analysis of the professional career of Daniel Carter Beard, 1850-1941. Ph.D. in Physical Education, 1975. 435 p. (C. W. Landiss)

Historical, biographical, analytical and interpretive methods were utilized to analyze Beard's life and career. The basic data in this study were collected on 2 extended trips. During the trips numerous manuscript collections, museums, and libraries were visited and private individuals were interviewed. A camera was taken to photograph letters, documents, illustrations, uniforms, awards, people and places visited. Beard achieved fame in the 1880's as a writer of boys' books and as a satirical illustrator of Mark Twain's work. While editor of Recreation magazine, Beard became one of the early leaders in the youth service movement. In 1910 he and other youth leaders consolidated their efforts into the Boy Scouts of America. For almost 3 decades Beard had a direct association with young boys through his involvement with outdoor camps. His leadership pioneered the areas of physical fitness, camping, character development, and purposeful recreation.

286. REICHLE, Marvin N. Development of an instrument to measure knowledge in recreational boating. Ph.D. in Physical Education, 1975. 294 p. (L. J. Dowell)

Two original forms of 120 items each were submitted to a panel of experts from which 2 preliminary forms of 100 items were developed. A Table of Specifications was designed and applied to the items to insure the evaluation of those areas deemed important. The preliminary forms were administered to 507 Ss who had owned or operated a boat for a period of not less than 1 yr or completed a boating safety course. Criteria for

retention of items for the final forms was ($\underline{p}$ = .10-.90), $r_{bis} \geq +.20$ and maintenance of specifications. The final test forms of 50 items each were developed and administered to 532 Ss for establishment of norms and provide concurrent validity. Final form A had a difficulty $\overline{X}$ of .43 and a discrimination $\overline{X}$ of .32. Final form B had a difficulty $\overline{X}$ of .41 and a discrimination $\overline{X}$ of .32. Descriptive statistics for both forms included: ($\overline{X}$, 21.22, 20.58) (SD, 7.55, 7.51) (r, .82, .82). Results indicated that the 2 parallel forms were reliable and valid and normative data may be used to evaluate boating knowledge.

287. YOUNG, Michael E. The effects of nandrolone decanoate on selected physiological parameters in male albino rats. Ph.D. in Health Education, 1975. 117 p. (C. W. Landiss)
Male Wistar rats (N=48) weighing 300 to 325 gm were randomly assigned to 6 treatment groups: exercise-high drug dosage, exercise-low drug dosage, exercise-placebo dosage, sedentary-high drug dosage, sedentary-low drug dosage, and sedentary-placebo drug dosage. High drug dosage consisted of 4 mg/kg body wt. of nandrolone decanoate. Low drug dosage was 1 mg/kg body wt. Placebo dosage consisted of 1 ml sesame oil/kg body wt. Rats were injected on the 1st day of wk 1, 4, and 7. Rats in the 3 exercise groups trained 5 days/wk for 8 wk by forced swimming. After 8 wk, body wt., blood chemistry, swim time, mating behavior and organ wt. were compared. Nandrolone decanoate was no effect on body wt., physical performance or mating behavior but does adversely affect at least 1 liver function of male albino rats.

TEXAS WOMAN'S UNIVERSITY (AILEENE LOCKHART)
DENTON, TEXAS

288. BARBEE, Myrtis B. The team teaching approach in physical education: A study of public secondary schools in Texas. M.S. in Physical Education, 1975. 43 p. (J. Rosentswieg)
Twenty school districts in Texas with a population of 70,000 or more were surveyed to determine how many had/had not used the team teaching approach in PE classes on the secondary level and what values they believed the methodology had in relation to traditional approaches. It was discovered that 65% of the schools were incorporating team teaching methods. The results indicated that those schools presently using this approach believe it to be an effective teaching procedure that has some inherent advantages in forms of flexibility and individualization. The reasons most frequently given for not using this approach were lack of finances and inadequate facilities.

289. COX, Rosann M. Musical accompaniment for dance: Preferences of males and females at four educational levels. Ph.D. in Dance and Related Arts, 1974. 114 p.

A 16mm optical sound color film was viewed by 896 male and female Ss from 4 educational levels, 5th, 8th, 11th, and college jr. Ss stated 1 overall preference for accompaniment for nonliteral dance from 4 musical styles: baroque, impressionistic, 20th century, and electronic music. Ss expressed like or dislike for each style on a 6 point Likert-type scale. Test-retest yielded overall r of .78. A 3 dimensional X^2 and 10 2 X 4 X^2 tests were used to test differences ($p < .01$). Significant differences appeared between Ss at all educational levels except 5th vs. 8th. Male and female Ss responded in significantly different manner at 2 educational levels, 5th and 11th. The younger Ss preferred electronic music while the older Ss preferred impressionistic and baroque music. Overall, the least preferred muscial style was 20th century. Female Ss rated all musical styles higher than male Ss.

290. IRANI, Gool R. The influence of the double hook sit on the lateral stability of the knee joint of the adult female. M.A. in Physical Education, 1975. 58 p. (M. Hinson)

Women student volunteers 20-25 yr of age (N=40) from TWU who had no record of previous knee injury were pre and posttested for lateral stability of the knee joint. On the basis of the pretest, two equated groups were formed. The exp. group performed the double hook sit for 2 5-sec periods 3 days/wk for 4 wk. ANOVA and Scheffé data analyses revealed that the double hook sit made no significant difference in the amount of lateral stability at the knee joint. However, a significant interaction between/among groups, trials, and legs with regard to abduction was obtained. Both knees of the exp. Ss became less stable in the tibial abduction but those of the control Ss increased in stability.

291. KAKER, Harriett L. A driver education curriculum for educable mentally retarded adolescents. M.A. in Physical Education, 1975. 171 p. (C. Sherrill)

This study entails the development, use and evaluation of a driver education curriculum designed to enable educable mentally retarded to pass the Texas Driver License Examination for a learner's permit. Ss (N=30) completed a 50 hr innovative classroom instructional program utilizing multimedia, practical observation, in-car observation, and simulators acquire knowledge. The hypothesis tested was that 25 of the 30 Ss could acquire learner's permits. Eligibility permitted 26 of the 30 to take the Texas Driver's Examination. Of the 26, 24 or 92%, passed. The efficacy of the program provided data for the

formation of a student workbook and teacher's manual designed to enrich and supplement a driver's education course which used the official Texas Driver's Handbook.

292. MERRILL, Stina M. Lighting designs for a modern dance: Preferences of men and women. Ph.D. in Dance and Related Arts, 1974. (J. Rosentswieg)

Films illustrating 4 lighting designs, used with 1 non-literal dance composition, were shown to 259 male and 309 female Ss, with little or no formal dance instruction, from different educational levels. Groups selected were 5th, 8th, 11th grades and college jr. Additionally, 65 experienced dancers were selected as Ss. To overcome the order effect, subdivisions of each group viewed the films in different sequences. Ss indicated their preferences for lighting designs and reasons for their selection. A 3-D Global X^2 test determined the degree of difference between lighting designs for educational level and sex ($X^2 = 69.6477$, $p < .01$). 7 subsequent 2-D X^2 tests determined no statistical significance for preferences between sexes, except among 8th graders. Significant differences were found in all tests comparing educational levels, or dancers vs. non-dancers. Educational level, presumably based upon age and maturity, was the single most important factor governing preferences among lighting designs.

293. Moses, Mary L. Predictors of success or failure of a selected group of freshman associate degree nursing students. Ph.D. in Health Education, 1976. 191 p. (D. Merki)

Indicators of success or failure of 119 fr. students of an Associate Degree Nursing program were identified from the CPI, Strong Vocational Interest Blank, Tenn. Self Concept Sacle, ACT composite scores, GPA, age, sex, and data from personal interviews. Findings of the study yielded 9 conclusions.

294. NEGRON, Maria d.l. M. Motor learning in mildly institutionalized mentally retarded persons: Throwing for accuracy. M.A. in Adapted Physical Education for the Handicapped, 1975. 60 p. (Teaff)

The effect of a 6 wk instructional unit on throwing overhand for accuracy was measured among 28 mildly retarded persons during the spring of 1975. Ss were residents of the Denton State School, ranging in age from 14 to 21 and in IQ from 50 to 70. The exp. group ($N=18$) was subject to the instructional unit and rewarded for progress while the control group ($N=10$) received no such treatment. A t-test ($p < .05$) revealed a significant difference of 2.67 between the 2 groups on the posttest. Within the exp. group, a t-test ($p < .05$) showed a significant difference of 7.61 between pre and posttests, whereas the control

group evidenced no significant differences.

295. PLUNK-BURDICK, Dolores M. Recommendations for professional preparation in dance for the public schools of Missouri. Ph.D. in Dance and the Related Arts, 1974. 343 p. (J. Rosentswieg)

Two original questionnaires were developed to survey principals (grades K-12), city directors of PE, and PE teachers in public schools in Missouri to determine the status of movement education, rhythmical activities, and dance; to determine the professional preparation of PE teachers in the 3 areas; and to determine the attitudes of those surveyed toward these 3 areas. Structured forms of movement were taught more often than creative forms. A majority of administrative personnel favored more areas of dance being included in the PE curricula and would like more coed classes than were being taught. PE teachers indicated a lack of professional preparation in the 3 areas surveyed; 40-50% would be willing to participate in in-service classes in the 3 areas. Administrative personnel attended related activities (music concerts, theatre, art, musicals, and square dancing) more often than the participated, and PE teachers attended and participated more in team, individual and dual sports activities than in dance and related activities. The apparent deficiency fo the content areas of the 3 areas is more a result of a lack of interest and/or inadequate professional education of PE teachers than any other variable.

296. RECTOR, Alice C. The attitudes of high school students following different drug education experiences. M.A. in Health Education, 1975. 95 p. (D. Merki)

Attitudes of 200 SHS Ss between the ages of 15 and 18 were determined following 8 1-hr drug education session. In 1 SHS 100 Ss participated in a drug education program planned and implemented by the student drug education committee. In the other SHS 100 Ss participated in a drug education program planned and implemented by the school nurse. The data were collected from each S through the use of an opinionnaire. Frequency counts and χ were tabulated for each item. X^2 was used to show existing relationships within the study. The Ss that participated in the drug education programs with student involvement or non-involvement in planning and implementation indicated positive attitudes toward drug education.

297. REDMON, Edna M. Changes in cardiorespiratory endurance of fourth, fifth and sixth graders during training. M.A. in Physical Education, 1975. 56 p.

The Texas 9 min run/walk test was administered to 150 ELE school children before and after a specific training program. The Ss participated in an 8 wk training program of jogging and

circuit training 3 times a wk for 20 min/wk. The relationships between resting and exercising HR and the degree to which they correlated with cardiorespiratory improvement were determined. A 3-way ANOVA showed significant differences ($p < .01$) between the sexes and between trials. There were no significant correlations between resting and immediate post HR (pretest $r = 0.012$), nor between posttest resting and exercising HR ($r = 0.174$) and cardiorespiratory improvement ($r = 0.006$).

298. ROSS, Barbara K. Changes in profoundly mentally retarded adult females during a walking program. M.A. in Physical Education, 1975. 77 p. (C. Sherrill)

Changes in body fat, distance walked, and selected behavior traits were examined in a group of 22 profoundly retarded adult females following a 12 wk walking program. The data on % of body fat and distance walked were analyzed by ANOVA, using a 2 factor fixed design with repeated measures on one factor followed by the Scheffé test. This yielded a significant difference in distance walked at the conclusion of the program, but none in % of body fat. The Mann-Whitney U-Test and the Wilcoxen test were applied to determine whether changes were made in the selected behavior traits, but yielded no significant differences.

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299. BLALOCK, Margaret A. Comparison of performance of selected motor skills by elementary school children. Ed.D. in Health, Physical Education and Recreation, 1971. (W. Baughman)

A motor skills test consisting of the softball throw for distance, shuttle run, vertical jump, squat thrust and basketball wall test was administered to 4th grade children (N=609). Comparisons were made of the skill performances of Ss taught by PE specialists and those taught by regular classroom teachers. The specialist had a positive effect upon the performance of skills, and the difference was particularly evidenced in the skills of agility and ball handling. Girls appeared to benefit considerably more than boys from instruction by specialists. The $\bar{X}$ scores were generally higher for boys than for girls on the battery of selected motor skills.

300. CALITRI, Donald L. An assessment of health related attitudes of college freshmen who live in selected Appalachian and non-Appalachian counties of Kentucky. Ed.D. in Health, Physical Education, and Recreation, 1975. 211 p. (W. Baughman)

College fr. (N=1,876) enrolled at Morehead State Univ., Western Ky. Univ., and Eastern Ky. Univ. were given the Olsen Health

Attitude Evaluation Instrument which consisted of 21 sub scale items. The school background and home location had little influence on health related attitudes except in the areas of divorce and homosexuality ($p < .05$). When comparing $\bar{X}$ scores of Appalachian and non-Appalachian college fr. with out-of-state college fr. significances were found in HE related attitudes in a limited number of areas. They included: Use of Mood and Behavior Modifiers, Homosexuality, Birth Control, Premarital Sexual Relationships, Community HE laws, Developing and Maintaining HE and Mental Adjustment ($p < .05$).

301. DZIKIELEWSKI, Joseph F. The changes in attitudes and self concepts of selected undergraduate students as a result of a teaching experience in elementary school physical education. Ed.D. in Physical Education, 1974. 120 p. (A. Watkins)

The Wear PE Attitude Scale Form A and the Tenn. Self Concept Scale were used with 88 undergraduate HE and PE majors, soph. and jr., at the Univ. of Ala. The Ss consisted of 2 exp. groups (N=44) who participated in an ELE school PE teaching experience and 2 control groups (N=44) who were in on-campus studies. ANOVA, Lindquist Type I, and Cattell's coefficient were used to compare attitude and self concept scores between the different groups. No statistically significant differences were found between the exp. and the control groups on attitude and self concept.

302. EAST, Jennifer B. A comparison of a group of five-year-olds who have older siblings to a group of five-year-olds who do not have older siblings on selected items of gross motor ability. Ed.D. in Health, Physical Education and Recreation, 1974. 100 p. (H. Connor)

Preschool children (N=34) from 2 centers at the Univ. of Ala. were tested on selected items of gross motor ability. 17 Ss had older siblings; 17 did not. The instrument for the study included the following items: 35 yd dash; beam walk; bean bag throw for accuracy; ball throw for distance; ball kick for distance; catching test; striking test; hopping test; skipping test; sliding test; galloping test; and standing broad jump. ANOVA and Cattell's were used to compare and correlate the Ss' scores classified as to the sibling and sex variables. The group with siblings scored higher on 8 of the 12 test items, 4 of which were significantly higher ($p < .05$). Males scored higher than females on 10 items, significantly so on 4. It was found that 5 yr-olds with older siblings were superior to those without older siblings on the test; there was a sex difference in gross motor ability of 5-yr-olds in this study; and the above items were judged as appropriate for measuring gross motor ability of 5-yr-olds.

303. EAST, Theron, Jr. The status of adapted physical education and the types and numbers of handicapping conditions in the public elementary schools of Alabama. Ed.D. in Health, Physical Education and Recreation, 1974. 144 p (H. Connor)

Data were collected from 33 public ELE school principals. Questionnaire concerns were: classification of types and numbers of handicapping conditions; health services; class considerations including identification for assignment, scheduling methods, time allocations, and evaluation; objectives; teacher preparation and load: activities; facilities and equipment; and administrative planning. A handicapping condition was evident in 13.5% of the children. EMR (3.8%), speech defects (2.2%), and obesity (1.5%) had the greatest frequencies. Health services including appraisals, referrals, and record keeping was inadequate. There were very few objectives for the PE classes which consisted mostly of team sports. Only one school had a planned adapted PE program. Students were assigned according to grade level or convenience. Most teachers were not prepared for teaching PE and very little actual instruction occurred. The most frequently used block of time was 30 min. Evaluation of children was by observation and letter grades were frequently used. Indoor facilities were found in about a third of the schools and only one school had access to a pool. The principals saw a need for adapted PE but had no plans for development in the near future.

304. GUNTER, Ken. Formulating and validating a college health knowledge test. Ed.D. in Health, Physical Education and Recreation, 1972. 356 p.

A multiple-choice test of 464 items was constructed. The test items were taken from 8 broad HE knowledge areas. A panel of judges who were authorities in the field of HE analyzed the 464 test items in terms of curricular valicity and deemed 433 items valid. The test containing the valid test items was administered to 510 students in 10 selected colleges. The students were enrolled in personal and community HE courses. Analysis of statistical validity by item discrimination analysis, item analysis of functional distractors, difficulty rating and scoring distribution was performed on this sample. This analysis indicated that 226 of the questions failed to reach previously established criterion. Two tests were developed from the 207 items that were declared valid by item analysis. Both tests were administered to a new population. Item analysis was performed again by use of the previously mentioned statistical techniques. Thirty-one items were removed from these tests, leaving 72 valid test items in 1 test and 90 in the other. Two final forms of the test were established with 81 items on each.

305. HARRIS, Ronnie. A comparison of the effects of different methods of training and detraining of the strength and speed of college men. Ed.D. in Health, Physical Education, and Recreation, 1971. (G. Pearson)

Four items of the Clarke-Schopf Strength Test, dominant and non-dominant grip strength, and time in the mile run were used to test 81 male college Ss in 4 tennis classes. The training period lasted 6 wk. Ss were randomly assigned to 3 groups. In addition to participating in tennis, group A ran 1 mi 4 times/wk and group B ran 4 440-yd dashes 4 times/wk. Group C participated in tennis 4 times/wk. After a 6 wk training period Ss did not train for 2½ wk. No significant difference was found for trunk extension, knee extension, ankle plantar flexion, dominant and non-dominant grip strength. Significant differences were found in two items, group C significantly improved their shoulder extension and group A decreased significantly in the ability to run the mi after the detraining period. It is concluded that tennis will increase shoulder extension strength. Strength developing activities and vigorous activities to improve cardiorespiratory endurance should be included if these results are desired.

306. HILL, Shirley A. The life of Jessie Reed Garrison Mehling, and her contributions to Health, Physical Education and Recreation. Ed.D. in Health, Physical Education and Recreation, 1971.

The study revealed that Mrs. Mehling, former State Supervisor of HPE in Alabama, was the first female to fill such a position in the U.S. She worked for better programs in Ala. through visitations, lecturing, preparing materials and bulletins, and helped develop curriculums for public schools. Mrs. Mehling planned and administered many conferences, clinics, and schools of instruction in social recreation training and square dancing. She served in many professional offices and received professional honors for her endeavors including the first female president of the Society of State Directors and President of the Southern Section of the AAHPER. Mrs. Mehling received the honor award from the Southern District of the AAHPER and was honored by the American Academy of PE in 1944 with the Academy Award. Her efforts through the yrs created an opportunity for every child to participate in a program of HPER in Ala. Her unselfish desire to help others, intense interest in people, and service to all professional groups stand as a tribute to her life. Jesse Mehling was a major factor in the development of the Ala. AAHPER as well as a significant contributor to allied national organizations.

307. LEWISKI, James L. An evaluation of the doctoral program in Health, Physical Education, and Recreation at the University of Alabama. Ed.D. in Health, Physical Education, and Recreation, 1974 304 p. (G. Stopp)

All 52 Ed.D. graduates with a major in HPER, 1964-1972, rated their professional preparation on 50 competencies in 8 areas according to quality, quantity, and utility. Areas were: History, Principles, and Philosophy; Administration, Supervision, and Leadership; Measurement, Evaluation, and Research; Contemporary Problems and Issues; Scientific Foundations; Instruction; Professional Preparation; and Athletics and Intramurals. Part II of the questionnaire concerned the graduate and doctoral program. Ratings were made on a 1-to-5 scale. The $\bar{X}$ scores for all areas on all criteria were average or above except in the area of Athletics and Intramurals and quantity in the area of Scientific Foundations; these were below average. The program needs were: additional faculty and time for faculty-student consultation, more opportunity for specialization within HPER, and additional facilities and equipment.

308. MC FARLAND, James P. A theoretical guide for planning community outdoor physical education and recreation facilities. Ed.D. in Health, Physical Education and Recreation, 1974. 178 p.

This study was designed to provide recreation and park administrators, educators, and other community leaders with a common method for planning community outdoor PE and REC facilities. The process included instruments, techniques, and guidelines which could be used to identify goals, objectives, interests and needs of the community; methods for using the instruments; and techniques for determining priorities and alternatives. The rational, efficiency oriented, and heuristic decision making processes were investigated and their relationship to the planning process was evidenced. The survey, critical incident, Q-sort, and Delphi techniques were probed to indicate their adaptability to planning for community outdoor PE and REC facilities. While certain activities were offered for the establishment of REC programs, it was suggested that programs be determined as a result of expressed needs of users or potential users rather than by perceptions of administrators. Continual evaluation should be built into program planning for the purpose of monitoring the extent that the needs and interest of the community are being met. Several types of play areas were illustrated, e.g. playgrounds, natural settings, parks, sporting, night, swimming, convertible, and winter facilities, along with the recommendations for aesthetics, safety, surfacing, maintenance and personnel. As a final recommendation, a step-by-step theoretical guide for planning community outdoor PE and

REC facilities was presented.

309. MC CLAIN, William N. An evaluation and analysis of the undergraduate professional preparation programs in physical education for men in the colleges and universities of North Carolina. Ed.D. in Health, Physical Education and Recreation, 1971. (G. Pearson)

North Carolina colleges and universities (N=16) cooperated in a study that evaluated and analyzed the undergraduate professional preparation programs in PE for men. Using an instrument by Bookwalter and Dollgener, comparisons were made for total score of attainment between state-supported and private institutions of N.C. Comparisons were also made for total score % of attainment between liberal arts institutions and teacher education institutions, and on the basis of student enrollment. From the rank order of area scores for each institution and the analysis of item scores in each area significant differences were noted: There was a wide range of variability among the programs; the programs ranked slightly above the national average; state-supported colleges ranked higher than private instituitons; teacher education institutions higher than liberal arts; university programs ranked higher than college programs; N.C. universities ranked higher than national average but N.C. colleges ranked below national average; institutions with enrollments between 5,000 and 9,999 ranked higher than institutions with 1,000 and 4,999 in the state and nation; insititutions with enrollments 1,000 and 4,999 ranked below the national average of similar institutions.

310. MEDLOCK, Jerry K. An analysis of selected criteria of doctoral dissertations in physical education. Ed.D. in Physical Education, 1974. 168 p. (W. Baughman)

Following a pilot study, a questionnaire was sent to 450 doctoral graduates from 9 southern universities. The data were compiled for 3 types of computer analyses: descriptive analysis, X^2, and Cattell's Coefficient of Pattern Similarity Index. The findings were based on an 82% return from a list of 450 doctoral graduates. Major findings were that over 54% of the respondents utilized their research technique in subsequent research and the average period of time from topic acceptance to final approval was 5½ mo. Two recommendations were that: the utilization of dissertations should be encouraged by PE professors, and a study should be constructed on the impact of the dissertation for those who were admitted to the doctoral program and have not graduated within a stated period of time.

311. MOORE, Paul S. The development of an instrument for the evaluation of the healthful school envrionment in secondary schools. Ed.D. in Health, Physical Education, and Recreation, 1976. 186 p. (W. Baughman)
Standards based upon related literature were selected which could be used as a criteria in evaluating the healthful environment of secondary schools. Statements included in the evaluation instrument were reviewed by a panel of jurists prior to their use in 4 secondary schools. The results were used to determine construct validity and reliability of the instrument. Intercorrelation coefficients for all sub-areas in the instrument ranged from .062 to .932. The reliability coefficient for the total instrument was .993. All sub-areas were significant except Sanitary Practices.

312. MOOREHEAD, Isaac T. An evaluative study of the undergraduate professional program in physical education at Alabama State University, 1972-1973. 116 p. (H. Connor)
The B-D Score Card was administered to 121 Ss composed of 21 soph., 37 jr., 41 sr., and 22 faculty-staff members. ANOVA was used to compute differences among the 4 groups for each of the 10 areas of inquiry and for a combined overall judgment. The Xs for the 4 groups showed no significant differences ($p > .05$) in 6 areas. In the following 5 areas significant differences were present at the .01 or .05 level: General Institutional and Departmental Practices; Curriculum Policies and Practies; Student Services; Supplies and Equipment; and Indoor Facilities. The combined respones of the 4 groups did not differ significantly from each other in their overall ratings of the 10 areas on the score card.

313. PRICE, Jimmie O. The development of an instrument to determine attitudes related to death and dying. Ed.D. in Health, Physical Education and Recreation, 1975. 182 p. (W. Baughman)
This study constructed an instrument to ascertain attitudes regarding death and dying based on sex, religious preferences, and the Ss' rating of the extent to which they were religious. Thurstone ratings of the original 325 item questionnaire by a panel of 29 judges reduced the total number of items to 130. This preliminary Death Attitude Scale was administered to 325 selected undergraduates at the Univ. of Ala. and the 54 items which were retained were divided into 2 forms, A and B. Undergraduates (N=1,021) attending the Univ. of Ala., Eastern Kentucky Univ. and Jersey City State College were tested, and resulting data were analyzed by means of the SPECO7 Item Analysis Technique, the Method of Summated Ratings, 2-way ANOVA, and discriminant analysis. A r of .8761 was reported for the Final Death Attitude Scale. Final Form A and B were found to be

significantly different ($p < .05$), as were all 3 demographic variables ($p < .01$).

314. SAUNDERS, Darrell B. Soccer in the national association of intercollegiate athletics from 1959 through 1974. Ed.D. in Health, Physical Education and Recreation, 1975. 203 p. (A. Watkins)

Pertinent data were collected from the NAIA headquarters, from the files of selected leaders, and from interviews held with personnel in the NAIA Soccer Coaches Association. A letter of inquiry was used to determine the development and present status of soccer in NAIA colleges. The story of NAIA soccer was developed chronologically giving significant information about the annual national tournaments and the elimination matches leading to the NAIA championship. The activities of the NAIA Soccer Coaches Association were also recorded. Directions for future growth and development included initiating a 2nd division championship for teams who have not participated recently in tournament paly, a new All American Team, and improved publicity for national tournament games.

315. SHARPE, Sheila G. The development of an instrument to determine health interests of college students. Ed.D. in Health, Physical Education and Recreation, 1975. (W. Baughman)

This study developed a HE interest interest inventory for college students and used the inventory to determine if significant differences existed among 1,329 Ss attending 6 colleges and univerisities in 12 major HE topical areas. The final inventory consisted of 12 major and 126 subtopical HE areas. Reliability of the total instrument was .9804 and 11 of the 12 major areas had rs of .8973 to .9630. Rank order analysis was used to indicate the rank of $\bar{X}$ degree of interest in the following areas: (1) Concept of HE, (2) Mental HE and the Nervous System, (3) Human Sexualtiy, (4) Marriage, (5) Venereal Diseases, (6) Drugs, Alcohol, and Tobacco, (7) Nutrition and Physical Fitness, (8) Cancer and Heart Disease, (9) Communicable and Noncummunicable Diseases, (10) Structure and Function of the Human Body, (11) Community HE, and (12) Environmental HE. ANOVA was used to determine if significant differences existed among the groups of this study.

316. SHOLLENBERGER, Barry J. The effects of two methods of video self-analysis on selected pitching variables. Ed.D. in Health, Physical Education, and Recreation, 1975. 110 p. (G. Stopp)

Univ. of Ala. pitchers ($N=18$) were tested for velocity and accuracy prior to and after receiving treatment. The exp. groups (video-tape, sequence camera) analyzed their pitching mechanics

with the aid of the Pitching Mechanics Checklist devised by the investigator. Three-way ANOVA indicated that the exp. conditions did not significantly affect the Ss' but that the accuracy scores were significantly higher ($p < .05$) among the exp. groups. Right-handed pitchers using the sequence camera for pcitorial self-analysis exhibited the most significant gains ($p < .01$). The use of video and photographic feedback, in conjunction with correct mechanical principles, appears to significantly improve the pitching accuracy of intermediate-age baseball pitchers.

317. STEVENS, Thomas B. A personality analysis of college baseball players. Ed.D. in Health, Physical Education, and Recreation, 1973. 146 p. (W. Clipson)

This study analyzed baseball players on 6 college and university teams with 3 instruments: Rotter's I-E Scale, Allport, Vernon, and Lindzey's Study of Values, and Cattell's 16 PF. This analysis was done by categorizing the Ss by teams, by positions, and on the basis of success. A series of comparisons were made by profile analyses of the various groups using Cattell's Coefficient of Pattern Similarity, r_p, as the primary statistical technique. It was found that there are significant differences between college baseball teams but not between team positions, and there are significant differences between more- and less-successful college baseball teams but not between more or less-successful players.

318. RODRIGUEZ, Alice. The relationship of self-concept and motor ability in certain selected negro and caucasian 10th grade girls. Ed.D. in Health, Physical Education and Recreation, 1972. 120 p. (H. Connor)

This study tested the relationship between motor ability (Scott Motor Ability Test) and self-concept (Tennessee Self-Concept Test). Ss (N=176) were selected randomly (88 caucasian, 88 negro) from 2 HS. Ss were tested during regularly scheduled PE classes. Pearson r was used to determine relationship between self-concept and motor ability, and the t-test (analyses of variance) was used to determine differences. Data were processed by an IBM Computer 360-50. Negro Ss had lower self-concepts than did caucasians. Caucasian Ss more variable and inconsistent in terms of self perception. No significant differences between Ss in ball handling, ball control and leg power were noted. No positive significant relationships were found among self-concept variables and motor ability variables of groups combined.

319. SUTHERLAND, Mary S. The changing emphases and trends in personal and community health for college students, 1921-1970. Ed.D. in Health, Physical Education and Recreation, 1973. 304 p. (W. Baughman).

This study compared the emphases and trends in personal and community HE for college students, 1921-1970, through a review of selected textbooks and professional journals. Five textbooks and 3 journals were analyzed by estimating the no. of words devoted to topical and subtopical concerns in the 5 10-yr time periods of 1921-1930, 1931-1940; 1941-1950; 1951-1960; and 1961-1970. %s of emphases were established for each topical and subtopical concern, and later compared to establish trends for the 50-yr time period. Data obtained from textbooks indicated that from 1921-1960, Senses, Nutrition and Mental HE received the greater emphases, and from 1961-1970, Family HE, Mental HE, and Consumer HE received the greater emphases. During all time periods, Preventive Medicine, Sleep-Rest, Safety-Accidents, Disease, and Occupational HE received the lesser emphases. Data obtained from the journals indicated that from 1921-1940, Consumer HE, Communicable Diseases, and Family HE received the greater emphases; from 1941-1960, Family HE, Consumer HE, and Senses received the greater emphases; and from 1961-1970, Consumer HE, Family HE, and Mental HE received the greater emphases. In all time periods, Preventive Medicine, Sleep-Rest, Safety-Accidents, Disease, Occupational HE, HE, and Stimulants-Depressants received the lesser emphases.

320. WASHBURN, Ramona. A half-century of girls' sports competition in Alabama high schools. (A. Watkins)

A chronological record was assembled of the development of extra-class sports competition for girls attending Ala. HSs from 1919 through 1974. Only competitive events sanctioned by the State Department of Education (DOE) were researched. Information was obtained from personal interviews, annual reports, min of professional meetings, periodicals, newspapers, microfilmed newspapers and records and files of the PE section of the DOE. Leadership roles played by several professional educators were vital to the growth of these events. Institutional and organizational support served as a needed catalyst. Major recommendations were: a person to work in girls' athletics with AHSAA; the Girls' Advisory Board should work closely with AHSAA on all aspects of the girls' program; untrained women coaches presently employed whould take advantage of workshops and coaching clincis to improve coaching skills; establishment of a central officiating board for men and women; colleges and universities should consider expanding opportunities to prepare women for administrative, coaching, and training careers; school personnel should become aware and receive guidance in

implementation of Title IX.

321. VANSANT, Henry C. The relationship of a disruptive home environment and permissive social attitudes among university freshmen. Ed.D. in Health, Physical Education and Recreation, 1975. 159 p. (W. Baughman)

An attitude opinionnaire was developed and administered to 266 fr. dormitory students at the Univ. of Ala. Ss were divided into 5 groups characterizing various existing home organizations for the purpose of identifying relationship of variables of home organization and permissive social attitudes. ANOVA revealed no statistically significant differences in the values and attitudes of Ss from 5 home organization types. $p < .05$ was found in a comparison using curricula as a variable. $p > .05$ was found using home organization, the male-female factor, socioeconomic characteristics, and the rural urban factor as variables.

322. WILDER, Milton R. The development of an evaluative scorecard for elementary school physical education programs. Ed.D. in Physical Education, 1975. 189 p. (W. Clipson)

A 95 item original questionnaire was validated by a jury of 12 authoities in ELE school PE. Values assigned each time, by the jury, were analyzed by the Thurstone scaling technique and a factor analysis. These techniques eliminated items with a Q-value $< .8$, a median value > 5.0, or a factor loading $\leq .3000$. These techniques eliminated 66 items leaving 29 items on the final form of the scorecard. The reliability of the scorecard was determined by multiple use by 15 educators evaluating Center Point ELE School in Jefferson County, Ala. On 22 of the 29 items, all evaluators answered the same. The remaining 8 items were answered within a range of 3 consecutive scores.

323. WILLIS, Robert M. A compilation and evaluation of state legislation providing for physical education. Ed.D. in Health, Physical Education and Recreation, 1971. (G. Pearson)

Rules and regulations provided by legislation and enabling acts of all states were interpreted according to status, form and content. Ratings were made by the state directors on the effect of laws on 20 elements of PE programs. Mandatory laws for ELE and secondary PE were contained in a majority of states. Specific or general laws for PE were found in 2/3 of the states and enabling acts in 1/3. About 1/2 of the states designated developmental purposes, 3/4 indicated time allotments, over 1/3 required adequate facilities, and 1/3 required major credit for teacher certification. It was recommended that regulations be specific and mandatory, include definite time allotments, teacher certification and developmental purposes, and that a method of evaluation be developed by states for constant use.

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FAYETTEVILLE, ARKANSAS

324. KIM, Chang K. Effect of exercise on liver and blood serum lipid. Ed.D. in Physical Education, 1975. 66 p. (G. Moore)

Rats (N=64) were divided into high fat diet and basal diet groups. There was an initial feeding period of 4 wks followed by the sacrificing of 4 rats from each group to determine changes in serum lipids. The remaining rats were then divided into exercise and sedentary groups. The exercise groups had 2 wks of pretraining and 8 wks of exercise on a motor driven treadmill with speed and duration gradually increased. At the end of the exp. period all rats were sacrificed and measures determined for serum lipid and body, heart, brain, and liver wt. ANOVA was used as the basic statistic. An intercorrelation matrix was computed for the measures and ts were determined to evaluate the differences between male and female rats. Conclusions were: An exercise program of running produces no significant effect on body wt , liver lipid and triglyceride in rats. However, cholesterol levels between exercised rats with normal diet and sedentary rats with high fat diet is significantly affected. A high fat diet produces significant increases in liver lipids of both exercised and sedentary rats. Male rats, exercised or sedentary, show higher organ wt growth and triglyceride levels than female rats.

325. REDDERSON, Lorraine A. The effect of selected exercise programs on the discomforts associated with menstruation of college women. Ed.D. in Physical Education, 1975. 107 p. (G. Moore)

Ss were 115 volunteer single women college students, $\bar{X}$ age 18.97 yr, selected on the basis of severity of menstrual discomforts as determined by responses on a questionnaire. They were placed randomly and proportionately, on degree of discomfort, into 1 of 5 groups: continuous abdominal exercise, continuous bicycle exercise, discrete abdominal exercise, discrete bicycle exercise, and psychological control. The continuous groups exercised daily and the discrete groups exercised 10 days before the expected 1st day of menstrual flow. The psychological control group was led to believe their neumuscular coordination exercises would relieve menstrual discomfort. They exercised on a discrete basis. Pre and posttests were administered for abdominal strength, body wt, back strength, leg strength, and plantar flexion strength. On or near the 5th day of each menstrual period Ss completed a questionnaire on menstrual discomforts and took the abdominal strength test. The study covered a 3 mo period. Multiple regression and ts for dependent samples

were the statistics used. The continuous abdominal, continuous bicycle, and discrete abdominal groups had significant decreases in menstrual discomforts and significant increases in abdominal strength. All 4 exercise groups had significant increases in leg strength and plantar flexion strength.

UNIVERSITY OF COLORADO (DALE MOOD)
BOULDER, COLORADO

326. AMES, Barbara G. A survey of elective physical education programs in New York State public high schools. M.S. in Physical Education, 1975. 108 p. (J. S. Fowler)

327. BRUBAKER, Margaret R. Effects of a special physical education lab on the physical performance of low-skilled boys and girls in grades one through four. M.S. in Physical Education, 1975. 125 p. (D. P. Mood)

328. MICHELOTTI, John. Differences in self-concept between male and female athletes, between varsity and non-varsity athletes, and between gymnasts and swimmers. M.S. in Physical Education, 1975. 47 p. (R. E. Bibler)

329. WAGNER, Susan A. The relative effects of selected learning strategies on the learning and retention of a stylus maze. M.S. in Physical Education, 1975. 39 p. (W. A. Robichaux)

UNIVERSITY OF CONNECTICUT (HOLLIS FAIT)
STORRS, CONNECTICUT

330. DELMORE, Faye J. The effect of two retention time intervals and three levels of overlearning on the retention of a gross motor skill by institutionalized moderately retarded males. Ph.D. in Physical Education, 1975. 96 p. (H. Fait)

Ss were 54 institutionalized moderately retarded males whose IQ range was 34-57, mental age was 4-5 to 9-8 yrs, and CA was not less than 10-0 nor greater than 45-0 yrs. They were taught to throw a bounce pass at a target. Upon reaching the learning criterion of 4 successful hits or on the perimeter of the target, they experience a 0%, 50%, or 100% overlearning treatment. Two different retention time intervals of 14 and 42 days were allowed to pass before a retention test was administered. A 2 X 3 factorial design was applied to the data based upon a random effects model. Analysis of each factor indicated that neither the length of time between the retention test and the original learning nor the interaction of the retnetion time intervals and the % of overlearning on the retention test scores was $p < .01$. However, it was found that the 50% and 100%

overlearning factors were $p < .05$. It was concluded that overlearning is an important factor to consider in the retention of a gross motor skill among institutionalized moderately retarded males.

331. REJESKI, Walter J. The effects of direct and indirect competitive envriionments on attitudes toward competition and primary involvement of college males and females in competitive weight training. M.A. in Physical Education, 1975. 95 p. (T. Sheehan)

Ss were college males (N=24) and females (N=26) participating in service classes at the Univ. of Conn. Individuals experienced either a direct or indirect competitive setting for a 6 wk period. In a pre-posttest deisgn, data were collected by means of a Semantic Differential in combination with Thurstone's Equal Appearing Interval Method and analyzed through the use of 2 tailed correlated t-tests. Females possessed more positive attitudes toward competition and primary involvement in wt. training after exposure to an indirect rather than a direct competitive setting ($p < .05$). Males who experienced the indirect treatment were more positive in their attitudes toward competition in wt. training than those in the direct group ($p < .05$). There was no difference in the strength gains between the direct and indirect groups of either sex ($p > .05$).

UNIVERSITY OF GEORGIA (CLIFFORD G. LEWIS)
ATHENS, GEORGIA

332. ALDRIDGE, John S. Certification of high school coaches as viewed by state directors of athletics, physical educators, and coaches. Ed.D. in Physical Education, 1974. 98 p. (R. Bowen, Jr.)

The feasibility and practicality of requiring state certification for HS coaches was determined by conducting a survy in which 44 state athletic directors 86 PE chairman, 43 HS PE coaches, and 47 HS non-PE coaches responded to questionnaires. Recommendations of the study were: coaching certifiation requirements should be adopted in all states; requirements should be developed by a committee of no more than 10 persons to include representatives from HS coaches, state certification personnel, HS administrators, PE teachers, and state directors of athletics; each state should designate which sports should have certified head coaches; requirements should consist of a minimum of 25 quarter hr; a 3 yr period should be allowed for currently active coaches to meet requirements; assistant coaches should meet requirements prior to receiving head coaching positions; and requirements should be enforced through state certification departments.

333. BARNES, Dorothy K. Relationships among knowledge of marihuana, use of marihuana, and self-concept of undergraduate students. Ed.D. in Physical Education, 1975. 124 p. (M. Vincent)

This study determined if knowledge of marihuana and self-concept have a significant relationship to the use of marihuana by undergraduate students. Also, an instrument was designed to measure knowledge of marihuana. A difference did exist ($p<.05$) between frequency of use and knowledge of marihuana, with heavy users scoring higher than less frequent users. No significant difference in self-concept was found between users and non-users of marihuana.

334. HARDY, Archie. Recreation programs in state park settings. Ed.D. in Recreation, 1974. 161 p. (R. T. Bowen, Jr.)

The study of recreation programs in state parks was undertaken to provide an inventory of present programs, supporting equipment and facilities, personnel, and funding sources; a description of comprehensive recreation programming throughout the nation; the development of a model for recreation programs in state parks, the evaluation of the model by a panel of experts. Information was gathered by questionnaire, and several conclusions were drawn.

335. HAWKINS, Jerald D. The effect of specificity strength training upon shoulder strength and sprinting speed. Ed.D. in Physical Education, 1975. 64 p. (M. Vincent)

Male volunteers (N=42) from the Univ. of Ga. PE program were pretested for sprinting speed and shoulder strength and were randomly divided into a control group and an exp. group. Although the difference in sprint speed gain between the groups (.07 sec) was not statistically significant, it may be of practical significance to coaches and athletes. The significant difference in the shoulder strength improvement of the groups occurred but there was no significant relationship between the improvement of shoulder strength and the improvement of sprinting spped.

336. JORDAN, Douglas L. The effect of visual and auditory feedback on normal and educable mentally retarded subjects. Ed.D. in Physical Education, 1974. 72 p. (R. T. Bowen, Jr.)

EMR (N=62) and Normal (N=62) Ss 12- to 16-yr-old were divided into 4 groups of N=31 and tested on a Lafayette photoelectric pursuit rotor and a custom built sonalert. Regardless of the type of feedback, normal S were significantly superior to EMR Ss on the learning task.

337. QUIRK, Daniel J., Jr. A model program for the training of personnel for base Special Services Division functions in the United States Air Force. Ed.D. in Recreation, 1974. 171 p. (R. T. Bowen, Jr.)

From an analysis of data collected from 15 Air Force Bases surveyed, 24 universities, 15 park and recreation departments, and an extensive review of the current literature concerning training programs, a model program for establishing and evaluating a base Special Services training program was developed.

UNIVERSITY OF ILLINOIS
URBANA-CHAMPAIGN, ILLINOIS

338. ANDRES, Terence L. Involvement of selected quadricep muscles during a knee extension exercise. M.S. in Physical Education, 1974. 51 p. (C. Dillman)

339. BALLARD, Joyce E. Cardiovascular responses of hyperactive children under methyphenidate (ritalin) medication during rest, exercise and recovery. Ph.D. in Physical Education, 1975. 227 p. (B. Massey)

Methylphenidate (Ritalin) is used for the treatment of hyperactivity in approximately 2% of ELE school children. This study evaluated the effect of methylphenidate on the cardiovascular responses of hyperactive children during rest, exercise and recovery from exercise. Additionally, the effects of drug dosage and physiological tolerance were investigated. Hyperactive children receiving methylphenidate (N=27) and 23 control children were measured twice, with 1 mo between testing sessions. The hyperactive children were measured once on methylphenidate and once on placebo (double-blind). The control children were measured to provide normative data. Measurements of HR, BP, and VO_2, were made during 2 min of rest, 5 min of walking on a motor driven treadmill, and 10 min of recovery. Conclusions were: methylphenidate produced significantly increased HR and BP throughout rest, exercise, and recovery which were dosage related; BP responses reached hypertensive levels with dosages of approximately .55 mg/kg and higher; physiological tolerance to methylphenidate did not develop; and during rest and exercise the circulorespiratory responses of the hyperactive children for the placebo test were significantly higher than were the responses of the normal children. While it is not know what long-term effect, if any, an increased cardiovascular response in children may produce, it was concluded that the possibility of physiological side-effects was greatly reduced by low-dosage utilization.

340. BOOMGAARDT, Susan J. An analysis of selected therapeutic exercise routines prescribed in the University of Illinois Exercise Therapy Clinic. M.S. in Physical Education, 1975. 139 p. (J. Razor)

341. COSTA, Carolyn A. Electromyographic analysis of lower leg muscle soreness. M.S. in Physical Education, 1975. 78 p. (C. Dillman)

342. CROISANT, Phyllis. Efficiency of bicycle ergometer work at selected rates of limb movement for college women. M.S. in Physical Education, 1975. 62 p. (R. Boileau)

343. DAHMER, Karen L. Measurements of attitudes of women coaches toward the conduct of interscholastic athletics for women. M.S. in Physical Education, 1974. 86 p. (R. Wright)

344. GROPPEL, Jack L. A kinematic analysis of topspin and backspin techniques in the tennis forehand drive. M.S. in Physical Education, 1975. 57 p. (C. Dillman)

345. GRYMALA, Denise A. Physiological adaptations with physical training, with interrelations in the ballistocardiograph, the electrocardiography and the heartograph. Ph.D. in Physical Education, 1975. 145 p. (T. Cureton)

346. HENRY. Grant G. A comparison of the employment status of black men and women physical educators in black institutions of higher education. Ph.D. in Physical Education, 1975. 138 p. (D. Matthews)

From 52 institutions 217 men and 111 women responded to a questionnaire (75% return). Percentages and X^2 data analysis resulted in several conclusions: as the salary range ascends, the ratio of women to men receiving higher salaries decreases; men earned more than women, had a lighter teaching load, and more often stated that research is a criterion for salary increases and for promotion; men were more likely to have advanced degrees, hold higher ranks, earn higher salaries and teach more upper division courses than women; the distribution of academic rank is significantly different in favor of men; and males had a better attitude toward teaching because of higher salaires, tenure, rank, and teaching loads.

347. HEYWARD, Vivian H. Influence of static strength and intramuscular occlusion on submaximal static muscle endurance. Ph.D. in Physical Education, 1974. 134 p. (B. Massey)

The relationship between static strength and submaximal, static muscle endurance of the grip squeezing muscles was studied in 49 males ages 17 to 33. The percentages of max static strength

used for the endurance tests were 30%, 45%, 60%, and 75% with local circulation to the muscles intact and artificially occluded by a pressure cuff. A high strength and a low strength group were formed based on the Ss' X max strength. Significant negative correlations were noted between static strength and endurance time for each treatment. The critical occluding tension level was found to be 60% max. voluntary contractile strength (MVC) for low strength Ss vs 45% MVC for high strength Ss. At lower tension levels, the endurance time of the low strength group was significantly greater but force output was significantly lower than that of the high strength group (ANOVA). The negative relationship between static strength and endurance time may be a function of the larger degree of intramuscular occlusion and greater force output of high strength Ss at the lower tension levels.

348. HILDEBRANDT, Tanya L. Body composition in college women during ten weeks of high resistance training. M.S. in Physical Education, 1975. 134 p. (R. Boileau)

349. HUNTER, James E. Role expectations of selected secondary physical education teachers and principals in Illinois. Ph.D. in Physical Education, 1975. 268 p. (R. Wright)

350. JOHNSON, Judith R. Intermodal relation to the visual and kinesthetic modes. Ph.D. in Physical Education, 1975. 124 p. (M. Souder)

Two exp. were conducted to assess the intermodal relationships of vision and kinesthesis in the judgment of length. The transfer of learning effect and contribution of each mode to coordinated visual-kinesthetic judgments were determined. Exp. I: Transfer. 108 Ss were randomly assigned to each of 4 independent treatments in a 4 X 2 X 3 factorial design. The second factor was learning scores, the third, distances to be learned (13, 23, 33 mm). Two exp. groups were formed by varying the mode during initial learning and transfer conditions. Two control groups learned auditorially and were tested either visually or kinesthetically on the judgment of length. No significant differences between transfer scores after auditory or visual training indicated a learning to learn set. Visual performance was impaired by prior training in both kinesthetic and auditory modes. The finding of no significant differences in transfer scores after kinesthetic or auditory training indicated that the cause of impairment is not specific to kinesthesis. Experiment II: Matching. Four matching combinations were tested: V-V, K-K, V-K, K-V. Each of 24 Ss served in all combinations. The visual and kinesthetic modes displayed marked similarity in length estimation. The intra-modal and cross-modal conditions were equal in absolute and variable error. The algebraic

analysis between distances revealed that kinesthetic estimation increased in negative error and the visual estimation increased in positive error as the length to be judged increased.

351. KENNEDY, Judith K. The effect on intra-modal discrimination training on cross-modal transfer of training in four-year-old children. M.S. in Physical Education, 1975. 112 p. (R. Martens)

352. MARINO, George W. Multiple regression models of the mechanics of the acceleration phase of ice skating. Ph.D. in Physical Education, 1975. 112 p. (C. Dillman)
This study quantified the fundamental mechanics associated with ice skating and developed multiple regression models to relate these mechanical factors and selected structural variables to the criteria: average acceleration, skating velocity, and time to skate 20 ft. High speed films were taken from the side and overhead views of 69 male, college age hockey players during a skating acceleration task. The films were analyzed and measures of 13 mechanical and 4 structural variables were recorded. These variables were used as predictors in multiple regression and forward selection stepwise regression analyses, designed to predict average acceleration over 20 ft, skating velocity after 20 ft, and time to skate 20 ft. Secondary models were developed to predict skating stride length and stride rate. Analysis of the regression models indicated that average acceleration, skating time, and stride length were predictable. Velocity and stride rate could also be predicted but with considerably less accuracy. The stepwise models also indicated the predictability of average acceleration (r = .73), skating time (r = .70), and stride length (r = .70). Estimated cross validation coefficients indicated that each of these criteria could also be predicted, with some precision, in other samples from a similar population. A high stride rate, placement of the recovery foot under the center of gravity, a low angle of takeoff, and marked forward lean throughout each stride were all conducive to optimum performance in the acceleration task.

353. MC LAUGHLIN, Thomas M. A kinematic analysis of the parallel squat as performed in competition by national and world class powerlifters. M.S. in Physical Education, 1975. 86 p. (C. Dillman)

354. MEIER, Klaus V. Authenticity and sport: a conceptual analysis. Ph.D. in Physical Education, 1975. 302 p. (M. Ellis)

355. MORGAN, Thomas D. An investigation of the factors influencing job satisfaction-dissatisfaction of physical education and athletic personnel in selected small liberal arts colleges. Ph.D. in Physical Education, 1974. 183 p. (D. Matthews)

Responses from 197 full-time PE teachers and coaches indicated that: achievement, work itself, and interpersonal relations-subordinates were rated by 90% of the group as important in satsifaction, while 3 factors causing dissatisfaction were: policy and administration, achievement (lack of) and personal life. Conclusions: PE and athletic personnel tend to be more satisfied than dissatisfied with their jobs; dissatisfaction was primarily related to the context of work; and feelings of job satisfaction-dissatisfaction were independent of the demographic variables investigated.

356. MUEHL, Grace. Within-day variation in circulorespiratory responses to a maximal exercise stress on a bicycle ergometer. M.S. in Physical Education, 1975. 94 p. (R. Bioleau)

357. SCANLAN, Tara K. The effect of competition trait anxiety and success-fialure on the perception of threat in a competitive situation. Ph.D. in Physical Education, 1975. 129 p. (R. Martens)

The purpose of this investigation was to determine the consequeces of Competition Trait Anxiety and Success-Failure on the perception of threat to self and how perceived threat is responded to in terms of state anxiety and self-protective behavior. State anxiety was assessed by palmar sweating and Spielberger's State Anxiety Scale form the State-Trait Anxiety Inventory for Children. Self-protective behavior was assessed by causal attribution, preference for cpponents, and preference for social comparison to others. The dependent variables were selected on the basis of empirical evidence that indicates that the factors are sensitive to perceived threat. The state anxiety findings indicated that a highly evaluative competitive situation is perceived as threatening and that greatest threat is manifested after failure. The responses to the causal attribution, opponent preference, and social comparison questions led to a greater understanding of the conditions under which self-protective behavior is evoked and manifested in a realistic competitive setting.

358. VANA, Richard E. Dynamic assessment of the abductor muscles of the shoulder at selected speeds of movement. M.S. in Physical Education, 1975. 49 p. (C. Dillman)

359. VANDINE, Dora E. Selected evaluative measures and their implications for selective admissions, guidance, and retention of physical education students in a professional preparation program. Ph.D. in Physical Education, 1975. 128 p. (R. Wright)

To establish guidelines for appraising teaching potential of students in PE, the relationship between success in student teaching and performance on the MTAI, Scott Motor Ability Test and the Barrow Motor Ability Test was investigated. There were no significant differences in the responses between the highly successful and the less successful at either the ELE or secondary levels of student teaching. The females tend to surpass the males in social attitudes and academic success; whereas the males were superior in the factors associated with motor skills ($p < .05$).

UNIVERSITY OF IOWA (LOUIS E. ALLEY)
IOWA CITY, IOWA

360. CONLEE, Robert K. Myocardial glycogen synthesis after exhaustive exercise in normal, alloxan-diabetic and insulin-treated alloxan-diabetic rats. Ph.D. in Physical Education, 1975. 252 p. (C. Tipton)

Adult male rats ($N=156$) were assigned to 1 of 3 groups (normal controls, alloxan diabetic, or insulin-treated alloxan diabetic) to study endocrine mechanisms associated with glycogen supercompensation. Animals were assigned to 6 sub-groups concerned with the time of sacrifice after a single bout of exhaustive exercise. The time of sacrifice ranged from immediately after exercise to 24 hr later. Resting results showed that the diabetic rats had higher blood glucose, cardiac glycogen, and glucose-6-phosphate levels than the other 2 groups. Immediately after exercise, all groups had glycogen depletion which ranged from 22 to 33% but it was significant (ANOVA) only in the normal and insulin treated groups. Findings with the diabetic group showed no glycogen supercompensation effect within a 24 hr period; thus, the rate of glycogen formation during the recovery period was slower than the other groups which showed increases of 42 to 54% over pre-exercise levels. When post exercise correlations were made, a significant inverse relationship between myocardial glycogen levels and % synthetase I was demonstrated to control ($r = -.64$) and in diabetic groups ($r = -.59$). Myocardial glycogen concentration and glucose-6-PO_4 levels were correlated and a significant ($r = .76$) relationship existed with the diabetic animals but no such relationship existed in the other groups.

361. HORGAN, James S. Effects of supplementary auditory and visual feedback on acquisition of stabilometer task by educable mentally retarded children. Ph.D. in Physical Education, 1975. 170 p. (G. Asprey)

The initial performance on a stabilometer by 100 EMR male and female children, 7- to 10-yr-old, was used to equate 4 exp. groups and a control group for supplementary auditory or visual feedback for correct or incorrect responses. Group designations include: visual in-balance, visual out-of-balance, auditory in-balance, and auditory out-of-balance. For each S, time-in-balance scores were converted to $\bar{X}$s for the first test, trials 1-3, and the second test, trials 10-12. Treatment trials, trials 4-9, were transformed to regression slope values and then to $\bar{X}$ values. Treatments-by-levels ANOVA was used for between-group analysis, and the t-test for paired data for within-group analysis. Significant findings ($p < .05$) were obtained between groups for both the treatment trials and second test. The visual in-balance group was superior to all other groups in both categories. The auditory in-balance group was superior to the visual out-of-balance group for treatment trials and superior to the control group in the second test. All treatment groups made significant gains ($p < .05$) in skill acquisition from 1st test to 2nd test, but the control group did not.

362. JOHNSON, Robert W. Response characteristics of subject-defined and experimenter-defined movements in motor short-term memory. Ph.D. in Physical Education, 1975. 146 p. (J. F. McCabe)

Ss ($N=28$) were alternately assigned to 1 of 2 exp. groups. Ss assigned to group SE performed 36 S-defined movements followed by 36 E-defined movements. Ss in group EE performed 2 consecutive series of 36 E-defined movements. Movements were made under the following conditions: immediate recall, recall following a delayed unfilled retention interval, and recall following a delayed filled retention interval. Analysis of absolute error between groups revealed that S-defined movements are recalled more accurately than E-defined movements. Retention interval conditions did not influence the recall of S-defined and E-defined movements differentially. The apparatus used was constructed in such a way that movement paremeters of times and velocities at different stages could be obtained. The resulting data suggested that while S-defined Ss performed similar movement sequences in the criterion movements and the reproduction movements, E-defined Ss did not. This variation in performance may have influenced the accuracy of recall.

363. JONES, Margaret A. Selected philatelic events in physical education. Ph.D. in Physical Education, 1975. 504 p. (J. Scahill)

PE activities and events which were noted and commemorated through the medium of postage stamps, were traced in 16 selected countries. The Scott Standard Postage Stamp Catalogue as well as other books and articles were scrutinized to determine which stamps pertained to PE activities. Information regarding criteria and persons responsible for stamp selection was obtained. Data were collected from historical and comparative PE materials, general magazines, and philatelic literature as well as correspondence with representatives of the governments and sports societies in these countries. The portrayal of PE on stamps was discussed in relation to topic of commemoration, history or background of stamp theme, and explanation and discussion of the importance and influence of that topic within the designated country. PE postage stamps were found to have been issued to note and commemorate significant events, famous persons, facilities, victories, cultural and artistic objects, tourism, propaganda for peace and freedom, political occurrences, perpetuation of national heritage, and to raise funds for both PE-related and non-related events, memorials, and organizations.

364. KERBER, Paul E. A study of Iowa sixth-grade teachers' knowledge of tests and measurements concepts. Ph.D. in Physical Education, 1975. 210 p. (D. Casady & R. Whitney)

Two forms (A and B) of a test designed to measure knowledge and understanding of important measurement concepts ordinarily included in 3-semester-hr undergraduate courses in educational tests and measurements were constructed. These were administered to 328 grade 6 teachers in Iowa public schools and 43 srs. majoring in education in 4 Iowa universities, together with a specially designed questionnaire. Analysis of data indicated that the test constructed is reliable and valid; teaching experience, certification level, amount of graduate study completed, and no. of tests and measurements courses completed are significantly related to a knowledge of measurement concepts; 6th grade teachers perform teaching tasks that could be improved by an increased knowledge of tests and measurements concepts; and the knowledge of college srs. and 6th grade teachers about important tests and measurements concepts do not significantly differ.

365. SCHMIDT, Darlene H. Basic mechanics of women's gymnastics. Ph.D. in Physical Education, 1975. 220 p. (K. Miller & M. Fox)

The present study attempted to select and identify principles of mechanics which relate specifically to skills in women's gymnastic events. Mechanical texts, skills technique articles, and a no. of gymnastic related research studies were surveyed. Biomechanical terms were then defined and a manuscript, written in terms familiar to gymnastic teachers and coaches, was developed. Successive movement pictures, traced from motion picture films, were constructed and included in the manuscript.

366. TRAVIS, Thomas M. The effectiveness of two methods of exercise used for the development of strength in flexors and extensors of the ipsilateral and contralateral hands. Ph.D. in Physical Education, 1975. 114 p. (G. Asprey)

Male Ss (N=44), 17- to 28-yr-old, were selected from a group of right-handed volunteers enrolled in PE skills classes at the Univ. of Iowa to compare the effectiveness of 2 methods of exercise used to develop hand strength. Six Ss were used to determine the function of selected flexors and extensors of the hand by electromyography. Ss were randomly assigned to proprioceptive-neuromuscular-facilitation and isometric-contraction groups. For pretests, each training session, and posttest, Ss performed, for 5 sec each, 5 trials with 20 sec rest between trials. Ss trained 3 days/wk for 5 wk. For both groups, significant gains ($p < .01$) in strength were made in the ipsilateral and contralateral hand flexors and extensors. Differences between groups for $\bar{X}$ gains in strength were not significant ($p > .01$). GMGs revealed that the flexor carpi radialis, flexor carpi ulnaris, and palmaris longus function as primary hand flexors, and the extensor carpi radialis brevis and extensor carpi ulnaris function as primary hand extensors.

UNIVERSITY OF KANSAS (JEAN PYFER)
LAWRENCE, KANSAS

367. BRODHAGEN, Pauletta A. A study on motor fitness of educable mentally retarded and normal individuals. M.S. in Physical Education, 1973. 81 p. (J. Pyfer)

368. BURKHEAD, Carlene M. The study of visual attention and alpha by a biofeedback unit. Ed.D. in Physical Education, 1974. 173 p. (J. Pyfer)

This study determined whether the alpha rhythm, as monitored by a Beta-Alpha-Theta-Delta Feedback unit, would demonstrate absence of visual attention under 13 exp. conditions of visual activity. Six males and 4 females, 8- to 10-yrs-old were matched on CA and IQ. No difference was found between the

"Visual Attention" group and the "Limited Visual Attention" group on the % alpha production under the exp. conditions; however, post hoc analyses revealed that differences in alpha-production occurred when the eyes were not actively involved in the task.

369. CALWELL, Michael N. A comparative study of the influence of motivation on the performance of 11 and 12 year old age group swimmers. M.S. in Physical Education, 1973. 100 p. (W. Osness)

370. CLEAVINGER, J. D. The incidence of injuries to football players in Kansas junior high schools. M.S. in Physical Education, 1974. 62 p. (W. Osness)

371. DICK, Patricia D. The effects of two training programs for the non-preferred hand on the development of the basketball performance level of high school girls. M.S. in Physical Education, 1975. 80 p. (L. Mawson)

372. DOREMUS, Marilyn I. An investigation into the effects of two types of physical education programs on the body image of visually handicapped pre-adolescents. M.S. in Physical Education, 1974. 84 p. (J. Pyfer)

373. EVANS, Dale. A study of off-season football conditioning programs at sixty-four selected NCAA universities. M.S. in Physical Education, 1974. 79 p. (W. Osness)

374. FISHER, Connie I. A comparison of body image and self-concept among orthopedically handicapped children affected by cerebral palsy and spina bifida. M.S. in Physical Education, 1973. 59 p. (B. Carlson)

375. FLICKNER, Robert E. A study of the characteristics of play in intercollegiate basketball with the 30-second time limit rule in effect. M.S. in Physical Education, 1974. 73 p. (Henry A. Shenk)

376. GENTRY, C. Diane. Relationship between the blood pressure levels of elementary school children and selected host and environmental factors. Ph.D. in Physical Education, 1975. 368 p. (W. Osness)

The relationship between BP levels in 2,350 healthy ELE school children and selected host and environmental factors were examined. Ss of mixed races, 5- to 13-yr-old, from large city, small city and suburb envriionments were investigated. Four consecutive BP readings consisting of 2 in each arm were taken. Information concerning host factors such as age, sex, race, ponderosity and familial tendency toward hypertension and environmental factors of family size, size of community, birth

placement of the child among his siblings and time of the day of BP determination were recorded. Stepwise multiple regression indicated that age is the best single prediction of the variables studied for both systolic and diastolic BP with ponderosity as the next variable; morning systolic BP readings tend to be lower in value than afternoon readings, and size of family is negatively correlated with both systolic and diastolic BP.

377. HORNER, Rhonda. The effect of interscholastic athletics in junior high school on girls' attitudes toward athletics. M.S. in Physical Education, 1974. 74 p. (W. Osness)

378. KARATUN, Ozdemir. Comparative analysis of rehabilitation through exercise and traditional treatment on coronary heart disease. Ph.D. in Physical Education, 1975. 367 p. (W. Osness)

The effects of rehabilitation and non-rehabilitation treatments of coronary heart disease were studied in terms of physical, physiological, behavioral, and pathologic parameters under several conditions. Ss (N=70) of the LaCrosse Cardiac Rehabilitation Program were matched with 70 Ss receiving traditional rehabilitation in Lawrence, Kansas. Treatment periods of both groups were 6-36 mo for myocardial infarction and post operative patients; 3-36 mo for cardiac prone and coronary artery disease cases using ANOVA and ANCOVA. The following conclusions were drawn: There are significant differences (.05-.01) between the rehabilitation treatment through exercise and traditional treatment of cardiac patients in terms of physical, behavioral (life style), physiological and pathological parameters; the recovery from disease and improvements toward a better health condition take less time in rehabilitated cardiac patient populations than in non-rehabilitated populations; 1 yr rehabilitation treatment is enough time to observe the significan changes; and age, somatotype, previous cigarette smoking habits, family history in cardiovascular diseases and previous physical activity levels of individuals cannot influence the positive treatment effect of rehabilitation.

379. MCELROY, Claire A. The effect of two training methods on the duration of underwater breath-holding of college men and women. M.S. in Physical Education, 1972. 89 p. (W. Osness)

380. MILLER, Dorothy E. The effect of an intervention physical education program upon the motor development skills, achievement-ability and social-emotional behavior of third, fourth and fifth grade behavior problem females. M.S. in Physical Education, 1975. 198 p. (J. Pyfer)

381. MONTGOMERY, Wayne J. A comparison of cardiac activity between normal and mentally retarded young males at rest and during mild exercise. M.S. in Physical Education, 1973. 62 p. (W. Osness)

382. RANKIN, Kelly D. Verbal and non-verbal interaction analysis of student teachers with students in elementary physical education. Ed.D. in Physical Education, 1975. 159 p. (J. Pyfer)

Differences between factors of verbal and non-verbal communication for 10 male and 32 female student teachers, dominant and submissive personality traits (Cattell's 16PF) of the student teachers and levels of ELE school taught were analyzed. From the subgroup comparisons using ANOVA 3 signifcant (.05) differences were found: The female student teachers used gestures more than their male counterparts; intermediate level (4, 5, and 6) ELE students spent more time frowining than did students at the primary level, and student teachers classified as "submissive" spent more time verbally rejecting their students than did those classified as "dominant."

383. ROBERTSON, Ann L. A comparison of body images measures among second grade children who participated in a movement exploration or a traditional approach to elementary physical education. M.S. in Physical Education, 1974. 84 p. (Jean L. Pyfer)

384. ROBITZ, James C. Correlation of motor performance and reading readiness at the kindergarten level. M.S. in Physical Education, 1973. 70 p. (J. Pyfer)

385. SEARS, David G. A biometric analysis of human pectoralis major muscle comparing male and female tissue. Ph.D. in Physical Education, 1975. 135 p. (W. Osness)

Anatomical differences between human male and female pectoralis major muscle (sternal head) at the fiber, myofibril and myofilament levels were examined. Measurements used at the different levels were cross-sectional area of fibers, $\bar{X}$ cross-sectional diameter of myofibrils and the no. of thick filament (myosin)/square unit area at the myofilament level. The 10 Ss (5 male, 5 female) were over 50 yr of age with no known chronic debilitating illness or disease of the neuromuscular system. All male Ss were significantly (.05) larger in fiber area than corresponding female Ss of equal sarcomere lengths. At the myofibril and myofilament levels of ultrastructure levels there appear to be individual differences between males and females.

386. SEVERINO, Anthony F. Effects of two weight training programs on strength improvement using the universal gym and movable weights. M.S. in Physical Education, 1974. 83 p. (W. Osness)

387. STOUFFER, Michael E. Reaction and movement time measures in educable mentally retarded children. M.S. in Physical Education, 1974. 85 p. (J. Pyfer)

388. SWEATMAN, Michael T. Relation of personality traits to certain subpopulations on a college football team. M.S. in Physical Education, 1975. 108 p. (K. Rodgers)

389. TATE, James. The effects of a supplemental weight training program on high school sophomore football players during a season of competition. M.S. in Physical Education, 1973. 72 p. (K. Rodgers)

390. TRUE, Susan. The effects of a "concepts of physical education" course on college women's attitudes toward physical activity. M.S. in Physical Education, 1973. 62 p. (W. Osness)

391. WEYFORTH, John S. A study of possible anatomical and physiological changes due to supplements to the diet of varsity intercollegiate swimmers. M.S. in Physical Education, 1974. 172 p. (W. Osness)

UNIVERSITY OF KENTUCKY (J. GRUBER)
LEXINGTON, KENTUCKY

392. DRAPER, Barbara J. The effect of camping on self-concept. M.S. in Therapeutic Recreation, 1975. 85 p. (D. Vinton)
The effect of a 1 wk residential Boy Scout camping experience on the self-concepts of 24 Boy Scouts was investigated. The campers and a control group consisting of 20 Scouts who did not attend camp during the exp. period were tested before and after the camp session with the Piers-Harris Children's Self-Concept Scale. The results showed that no significant improvement in self-concept could be attributed to the camping experience.

393. EWING, John L., Jr. Cardiorespiratory responses of sedentary college women to treadmill training at a specified heart rate intensity. M.S. in Physical Education, 1975. 61 p. (C. Stull)
The effects of training at 65% of the HR reserve added to resting HR were examined for 13 S who trained 3 times/wk for 9 wk. The duration of each session was equal to the time necessary to elicit 1,000 excess heart beats above resting level. A Quinton HR Controller automatically adjusted the treadmill speed to maintain the desired HR. The parameters examined were MVO_2

($l \cdot min^{-1}$ and $ml/kg \cdot min^{-1}$), HR response to a standardized bicycle ergometer workload of 300 kpm/min, O_2 pulse, pulmonary ventilation, V_E, and HR at $M\dot{V}O_2$. All parameters except for HR at $M\dot{V}O_2$ improved significantly ($p < .05$).

394. GRAY, Gary R. The relationship between elements of team cohesiveness and team success at various levels of basketball competition. M.S. in Physical Education, 1975. 126 p. (J. Gruber)

This study determined if relationships existed between selected aspects of team cohesiveness, performance satisfactions, motivation, assessment of power, and team success among 5 levels of basketball competition and between 1st string players and last string players. Ss were 515 male basketball players from 8 small fry teams, 10 JHS teams, 9 SHS teams, 10 small college teams, and 7 large college teams. Each player completed a 15-item questionnaire during the final wk of the team's respective basketball schedule. Across all 5 levels of competition, won-lost records seemed to be substantially related to team performance satisfaction items. At the SHS level a relationship existed between won-lost records and team cohesiveness items for 1st string players. It appeared that small fry and JHS teams were more cohesive than SHS, small college, and large college teams.

395. NOLAND, Melody P. Relationships between selected personality and motor variables in emotionally disturbed children. M.S. in Physical Education, 1975. 114 p. (J. Gruber)

Relationships between selected personality and motor variables in emotionally disturbed children were investigated in 61 male and female children, ages 6-13, in residential Re-Ed schools. r's were obtained for measuring instruments with this special group of Ss. The results revealed that: selected personality and motor variables appeared essentially unrelated; grip strength, 50-yd dash, and flexed-arm hang were highly reliable; the arm and leg coordination measures, the 4 second-order factors of the Children's Personality Questionnaire (CPQ) and Early School Personality Questionnaire (ESPQ), the Self-Esteem Scale, the Body Cahtexis Scale, and the Body Cathexis-Short Form all exhibited satisfactory r's; and the 14 primary factors of the CPQ and ESPQ exhibited generally unsatisfactory r's.

396. PORTER, Marjorie M. The influence of local fatigue on fractionated reaction time. M.S. in Physical Education, 1974. 54 p. (G. Stull)

The effects on RT and its premotor and motor components were observed when a muscle group was fatigued to 60 or 80% of its max. volitional strength. The 19 male Ss squeezed a hand-gripping

device until 40 or 20% of initial strength was degraded. At that point, tension was reduced to 2 kg, and S then reacted to an auditory stimulus by gripping as quickly and forcefully as possible. Seven trials were administered at each level of fatigue and also under a non-fatigued condition. ANOVA revealed a significant ($p < .05$) lengthening of premotor time when muscle was fatigued to 60% of initial strength. No other observed difference in motor time, premotor time, or total RT was observed.

397. WOLFE, Delmar R., Jr. The effect of systemic fatigue on fractionated reaction time components. M.S. in Physical Education, 1975. 64 p. (G. Stull)

Ten RT readings, fractionated into premotor and motor components, were taken on 28 male Ss following a control condition and also after a 5 min exercise bout at an intensity of 60 or 80% of the HR reserve plus resting HR. ANOVA failed to reveal any significant differences in premotor, motor, or total RT which could be attributed to any level of systemic fatigue.

UNIVERSITY OF MARYLAND (DAVID H. CLARKE)
COLLEGE PARK, MARYLAND

398. BEAUDET, Suzanne M. Comparison of swimming and running at equivalent heart rate intensities for improving cardiovascular efficiency of young adult women. M.A. in Physical Education, 1975. 46 p. (D. Clarke)

Changes in cardiovascular efficiency derived from training programs using swimming and running at equivalent HR intensity, duration, and frequency were investigated. The Ss were 22 young women aged 18-30 yr. Ten participated in the running group and 12 participated in the swimming group. The Ss were tested for $\dot{V}O_2$ at a projected 90% of max. HR before and after a 6 wk training program. The training programs consisted of running or swimming at a HR intensity of 150 bpm for 12 min/session, 4 sessions/wk. No significant difference was found between the groups as a result of the training, although both groups improved significantly in $\dot{V}O_2$.

399. GRIFFIN, Charles A. A descriptive analysis of the sport and physical fitness pursuits of selected inmates at a state correctional institution. M.A. in Physical Education, 1975. 132 p. (A. Ingram)

Inmates (N=45) were interviewed to assess participation and opinions on sport and physical fitness activities before and during incarceration. Most inmates participated in sport and physical fitness activites 5 hr or more/wk while incarcerated, and participated more frequently in sports during incarceration than before incarceration. They expressed the opinion that

sport and physical fitness activities had: a great effect on their physical health, ability to release tension, and ability to use leisure time effectively; a moderate effect on their ability to socialize and develop self respect; little effect on making prison life more normal; and little effect as a disciplinary tool. In the opinion of the majority of the participants, sport and physical fitness activities could be used as an effective means toward rehabilitation.

400. HASLAM, Robert W. Frequency of chronic exercise as a determinant of main coronary artery area in rats. Ph.D. in Physical Education, 1975. 105 p. (D. Clarke)

The effects of various frequencies of training of young, male, albino rats were studied on the cross-sectional areas of the main coronary arteries, ventricular dry wt, body wt, coronary area to ventricular dry wt ratios, and ventricular dry wt to body wt ratios. Also hearts were examined to locate cardiac necrosis. Animals (N=69) were assigned randomly to a control and 3 exp. groups. The control group remained sedentary for 10 wk, and each of the exp. groups swam 1, 5, or 10 times/wk over 10 wk. There was an increased area of the left coronary artery, but ventricular dry wt were similar among all groups. Body wt had an inverse linear relation to frequency of training, and groups training 5 and 10 times/wk had samller body wt than the group training 1 time/wk. The coronary area to ventricular dry wt ratios increased linearly with frequency of training, as were ventricular dry wt to body wt ratios. The group exercising 10 times/wk possessed a $\bar{X}$ ventricular dry wt to body wt ratio larger than that of the group training 1 time/wk.

401. HAYWARD, Craig D. Relative muscular endurance changes in elbow flexion as a function of carbohydrate loading. M.A. in Physical Education, 1975. 93 p. (D. Clarke)

Male Ss (N=22) were randomly divided into exp. and congrol groups and tested for elbow flexion endurance at various intervals on a wt-loaded ergograph. After the initial pretest, the exp. group consumed a low carbohydrate diet for 3 days, was tested for arm endurance, and then was given a high carbohydrate diet for the final 3 days before being retested. The control group consumed a normal mixed diet for all 6 days, being tested at identical times as the exp. group. The dietary intake of carbohydrate following an exhaustive depletion bout of elbow flexion work caused marginal increases in the ability to perform endurance work of the local muscle tested. A high fat and protein diet did not lead to a reduction in endurance, as has been shown to occur when the total body endurance is involved.

402. JONES, Linda M. A perceptual-motor oriented physical education program's effects on perceptual-motor ability and academic readiness. M.A. in Physical Education, 1975. 90 p. (A. Ingram)

The effectiveness of a 50 lesson, perceptual-motor (PM) oriented PE program to develop academic readiness in 49 kindergarten children was investigated. The exp. group received 25 min of PE daily while the control group had no PE during the exp. period. The Boehm Test of Basic Concepts and the Dayton Sensory Motor Awareness Survey measured academic ability and PM ability. Data did not clarify what effect the exp. program had on academic readiness but did indicate that a PM program would positively affect PM development.

403. PROCOPIO, Barbara L. Family background study of participants in high risk sports. M.A. in Physical Education, 1975. 91 p. (L. Vander Velden)

The sex, socioeconomic status, birth order, family size, and perceived parenting practices were studied among 131 high risk and 58 low risk sport participants. Sex was significantly related to risk involvement, while the remaining variables were independent of risk involvement.

404. RIGGLEMAN, J. Samuel. Motivational differences among superior college varsity athletes, average college varsity athletes, and college nonathletes as measured by the Motivation Analysis Test. M.A. in Physical Education. 1975. 69 p. (B. Husman)

Groups consisting of 23 superior athletes, 25 average athletes, 25 SHS athletes and 26 nonathletes were given Cattell's Motivation Analysis Test. No significant differences were found across the 4 athletic levels, the combined athlete and nonathlete groups, the combined athlete and SHS athlete groups, nor between the superior and average athletic groups. A stepwise discriminant analysis showed that SHS nonathletes had higher super-ego and narcissism than athletes.

405. SCHOEDLER, James. A comparison of the use of active game learning with a conventional teaching approach in the development of concepts in geometry and measurement at the second grade level. Ph.D. in Physical Education, 1975. 91 p. (J. Humphrey)

Two groups of 2nd graders were taught 15 lessons which contained concepts of geometry and measurement; 2 other groups were taught the same academic concepts through an active game learning medium; and 2 groups served as control Ss and were not taught the academic concepts. The Ss taught by means of the active game medium did not score significantly higher than the Ss taught by means of the commercially developed academic approach.

406. WEINBERG, William T. Perceived instrumentality as a determinant of achievement-related performance for groups of athletes and nonathletes. Ph.D. in Physical Education, 1975. 190 p. (B. Husman)

The effects of perceived instrumentality on the performance of individuals classified as high or low in resultant achievement motivation (nAch) were studied. Levels of resultant nAch of athletes vs nonathletes were also compared. The Mehrabian Achievement Scale (MAS) was given to 857 athletes and 673 nonathletes from 3 small and 2 large colleges. Athletes exhibited a significantly higher level of resultant nAch than nonathletes, the resultant nAch level of individual sport athletes was significantly greater than that of team sport athletes, and levels of resultant nAch were similar for small and large college athletes. Based on MAS scores, 30 athletes and 30 nonathletes were classified as high in resultant nAch and 30 athletes and 30 nonathletes were classified as low, and Ss performed pursuit rotor and anagram tasks. Perceived instrumentality ratings for each of the exp. groups were inferred from responses to a questionnaire which assessed the pursuit rotor and anagram tasks in terms of their relevance to future goals and their importance for self-evaluation. The athletes rated the pursuit rotor task significantly higher in perceived instrumentality than the nonathletes, while the nonathletes' ratings for the anagram task were significantly higher than those of the athletes.

407. WHITE, Gavin R. The relationship between the degree of group organization and the effectiveness of small sport groups. M.A. in Physical Education, 1975. 80 p. (L. Vander Velden)

The players and coaches of 14 recreational league basketball teams were examined prior to and midseason on the degree of consensus among team members on the value of individual members to the group, and on the degree of agreement between team members and the coach on the value of individual members to the group. Information on the task ability of the players was assessed in order to control for the influence of basketball ability on team performance. Team effectiveness was assessed in 2 ways: absolute success was overall team winning %, and relative success was the degree to which a team met its expectations for success. No relationship existed between the degree of status-concensus among team members or between team and coach and the performance of small sports groups. The use of relative success as a measure of team effectiveness and the controlling for ability had no effect on this relationship.

UNIVERSITY OF MINNESOTA (J. SHICK)
MINNEAPOLIS, MINNESOTA

408. AHRABI-FARD, Iradge. Implications of the original teachings of Islam for physical education and sport. Ph.D. in Physical Education, 1975. 208 p. (R. Osterhoudt)

This work inquires into the nature and significance of PE and sport as shown by the original vision of Islam. Emphasized are the religico-philosophic and education commitments of Islam, the Islamic conception of life and sport as a state of "becoming," the Islamic conception of the interdependency and unity of body and soul, and the Islamic view that life generally, sport in particular, ought to seek a unified physical, moral, and spiritual piety. The Islamic vies of PE and sport differs little (moreso in degree than qualitatively) from characteristically Western views.

409. BONSTROM, Mary E. The influence of selected demographic factors on value positions and decision-making situations related to drug use in a selected community college. Ph.D. in Education, Emphasis in School Health, 1975. 178 p. (H. Slocum)

Two instruments designed by the writer, a value position indicator and a set of decision-making situations based on 3 broad alternative value positions (absolutistic, relativistic and hedonistic) were administered to 504 community college students. A significant correlation was found between each of the 3 positions on the value position indicator and the decision-making situations. Significant differences were found in the indicated value positions and decision-making situations according to sex, age, and drug use patterns, but not with regard to marital status, religion, GPA, or enrollment in a drug education course.

410. CRUM, Cecilia A. Comparative study of personaltiy traits of women intercollegiate and women intramural basketball players. M.A. in Physical Education, 1975. 55 p. (M. Young)

The 16PF was administered to 48 women, 24 intercollegiate basketball players and 24 intramural basketball players. The intercollegiate group was more tough-minded and suspicous, while the intramural group was more tender-minded and trusting ($p < .05$).

411. ECKLUND, John A. A comparison of the effects of variation in task difficulty in the transfer of basketball shooting accuracy among college, senior high, and junior high females. Ph.D. in Physical Education, 1975. 130 p. (J. Shick)

Ss were 310 females (JHS=96, SHS=107, and college=107) who were

stratified by skill, after a 120-shot pretest, and randomly assigned into 4 groups within each academic level for 10 daily exp. sessions. C_1 participated in testing only; C_2 shot at an 18 in. basket, E_1 shot at a 16 in. basket, and E_2 shot at a 20 in. basket. A one-handed 12 ft. shot from in front of the basket was used for all exp. and testing sessions. Posttesting consisted of 200 shots at the 18 in. basket and was evaluated by the no. made, a differential scoring system, and the no. of "swishers" made. ANOVA, ANCOVA, and other interpretations were used to evaluate the data. Conclusions: no determination can be made whether the difficulty-easy or easy-difficult direction of transfer is better; recording of "swishers" may provide a better basis for assessing skill refinement than a differential target scoring system; improvement of accuracy is not dependent on the variation in basket size practice; and 120 trials for 10 consecutive daily exp. periods is sufficient to enhance accuracy in basketball shooting.

412. KOSTKA, Madonna M. The impact of selected nature center programs on sixth grade pupils. Ph.D. in Education/Recreation, 1975. 350 p. (E. Jaeger)

An environmental attitude scale, a nature activities questionnaire, and a program evaluation form were designed and tested for appropriateness and readability. These tools were validated by a jury of experts and shown to have Hoyt r ranging from .75 to .83. Pre and posttests showed no significant difference in environmental attitude scale total scores caused by participation in a selected nature center program and related activities of up to 7 hr duration. However, inner-city and suburban Ss showed quite different reactions within environmental attitude scale categories. The selected programs appeared least successful with Ss who: registered low pretest scores, indicated least favorable program evaluations, and lived in inner-city conditions. Over 1,000 6th graders and their teachers from 2 school districts participated in pilot and main studies.

413. LIANG, T. C. Michael. Effects of intensity, duration and frequency of training on maximal aerobic capacity and associated physiological and biochemical measures. Ph.D. in Physical Education, 1974. 185 p. (J. Alexander)

Effects of training at intensities (I) of 40% and 60% of $\dot{V}O_2$ max. and durations (D) of 15, 30, 45, and 60 min/day, 3 days/wk for 6 wk on various physiological and biomechanical measures were examined. College males ages 19-26 yr with $\bar{X}$ $\dot{V}O_2$ max = 51 ml/kg/min (N=28) were randomly assigned to 8 exercise regimens or a control group. Two-way ANOVA showed $p < .05$ at the 4 Ds on $\dot{V}O_2$ max and max O_2-pulse but not at the 2 Is. However, $p > .05$ was found at both I and D on max. HR, max $\dot{V}_E$, max work capacity, serum dopamine-beta-hydroxylase (SDBH) and serum

cholesterol (SC). Training threshold for the improvement of $\dot{V}O_2$ max. was observed in group trained at 60% I (HR = 148bpm) for 60 min (2%). The minimal training for the retention of initial fitness was found at 60% I with 45 min D, and 40% I with 45 or 60 min D. All other regimens and the control group showed a loss of 2.5 to 9%. The results also described that persons with initial $\dot{V}O_2$ max. less than 42 and 51 ml/kg/min, required a minimal exercise stimulus of 40% and 60% I, respectively. Significant differences were observed between exercise D of 15 and 60 ($p < .05$), 30 and 60 ($p < .01$), 30 and 45 ($p < .05$) in both $\dot{V}O_2$ max. and max O_2-pulse. SDBH and SC showed no difference ($p > .05$) before and after training at either 60% or 40% I for 15-60 min/day. All parameters obtained in the study were discussed.

414. MAAS, Gerald M. The energy cost of selected weight training exercises. Ph.D. in Physical Education, 1974. 238 p. (R. Serfass)

Energy costs and physiological responses to selected wt. training exercises performed under 2 training regimens, relationships between $\dot{V}O_2$ max. and selected metabolic parameters, and energy cost of submaximal positive and negative wt training work were investigated in 24 experienced college wt trainers. $\dot{V}O_2$ and HR were measured as S performed repeated sets of each wt. training exercise during an exercise-recovery period. Energy costs of the wt. training exercises performed under 2 different training regimens were found to be very similar even though 1 regimen elicited significantly more physical work. Within each regimen, the squat exercise elicited higher energy costs than the bench press. The efficiencies of wt training exercises as they were performed under each regimen tended to balance energy costs. HRs determined during wt training exercises were submaximal and efficiencies of wt training exercises were low when compared with treadmill running. $\dot{V}O_2$ max. was found to be related to exercise and recovery HR response during the wt training work. Postive and negative work determinations indicated that positive work elicited higher energy costs than negative work and HRs were lower during negative work.

415. MORGAN, William J. Sport and temporality: An ontological analysis. Ph.D. in Physical Education, 1975. 235 p. (R. Osterhoudt)

This investigation developed an ontological account of sport in terms of its underlying temporal nature. The major thesis entertained was that sport is based in a distinctive temporal modality (future, past, present). The philosophic framework for this endeavor was distilled from Heidegger's theory of time as contained in his magnum opus, Being and Time. Beginning

with an initial consideration of the import of Heidegger's conception of time for sport, the analysis proceeded to an investigation of the temporal constitution of training which, in turn, was followed by an analysis of the temporal dimensions of sport proper.

416. WILSON, Virginia M. Effect of water exercise on weight, selected girth and skinfold measures. M.A. in Physical Education, 1974. 42 p. (M. L. Young)

Selected wt., girth, and body fat measures of adult women were taken before and after participation in a water exercise class to determine the changes, if any, in those measurements as a result of the exercise. Ss for the investigation consisted of the members of 2 water exercise classes, one meeting 2 hr/wk for 8 wk, the other meeting 1 hr/wk for 10 wk. Pre and post measures of wt., 3 girth, and 3 body fat measures revealed no differences between the 2 groups. Supra-iliac body fat decreased significantly within the group having the more intensified exercise program.

UNIVERSITY OF MISSOURI (J. ROBERTS)
COLUMBIA, MISSOURI

417. FRANCIS, William J. Evaluation of the 40-70-40 concept as a means of assessing cardiorespiratory fitness. Ph.D., 1975. 190 p. (J. Roberts)

This study compared several approaches to the assessment of fitness through physiological parameters in a laboratory setting; evaluated the concept of repeating a submaximal exercise bout following a more strenuous exercise bout as a measure of fitness; and extrapolated the possibility of extending the above concept to a nonlaboratory milieu. Nine measures of fitness were evaluated in order to answer the above questions: directly measured $\dot{V}O_2$ max, indirect measurement of $\dot{V}O_2$ max, (by 3 separate methods), anaerobic threshold, exercise HR, recovery HR, a treadmill test based on the 40-70-40 principle of Hartley and Saltin (1968) and a bench-stepping test based on the same principle. Volunteers ($N=24$) representing high, moderate, and low levels of state conditioning served as Ss for this study. Data, analyzed by r, X^2, ANOVA and discriminant analysis, revealed that the single most valid measure of fitness was the directly measured $\dot{V}O_2$ max with anaerobic threshold and the 2nd best measure for discriminating among levels of state of conditioning. The 40-70-40 principle per se proved to be a valid criterion for the assessment of state of conditioning but the extension of the bench-stepping variation to field testing presents procedural difficulties. Pending further investigation, that test may be considered a tentative nonlaboratory approach to fitness testing.

418. HOLLINGSWORTH, Jay G. Effect of passive exercise on range of motion of cerebral palsy patients. Ed.D., 1975. 139 p. (J. Roberts)

Ss (N=75) were grouped according to type of cerebral palsy, tested for max. amounts of passive elbow extension and passive hip abduction, and randomly assigned to 1 of 5 groups. Four groups received either 10 or 30 passive movements of elbow extension and hip abduction administered either 1 or 3 times/wk. A control group received no passive movement. The passive exercises were administered for 6 consecutive wk by a registered physical therapist. Results of the study showed that the dyskinesic and ataxic groups had significantly greater amounts of passive movement than the spastic group before treatment and also made significantly greater increases than the spastic group for both articulations. The following comparisons resulted in statistically significant differences: all exp. groups increased range more than the control group; the 3 day/wk groups increased more than the 1 day/wk groups; the 30 movements/day groups increased more than the 10 movements/day groups. It was concluded that passive exercise can be effective in increasing range of motion of cerebral palsy patients.

UNIVERSITY OF NORTH CAROLINA (P. BERLIN)
GREENSBORO, NORTH CAROLINA

419. AKERS, Patricia A. Female role—girls' basketball rules; 1940-1971—an era of change. M.Ed. in Physical Education, 1973. 98 p. (C. Ulrich)

420. ALLEN, Judith N. Chromatics. M.F.A. in Dance, 1972. 73 p. (V. Moomaw)

421. AMOS, Lundee W. Health knowledge and interests of students at Guilford Technical Institute, Jamestown, North Carolina. M.Ed. in Health Education, 1973. 110 p. (M. Solleder)

422. ANDERSON, Norma J. Achievement motivation of general students and selected women in sports. M.S. in Physical Education, 1974. 71 p. (P. Berlin)

423. ARRIGHI, Margarite A. The nature of game strategy observation in field hockey with respect to selected variables. Ed.D. in Physical Education, 1974. 132 p. (K. Barrett)

424. BAILEY, Nancy J. The effects of contingent and noncontingent social reinforcement on performance of children in a ball-striking skill. Ed.D. in Physical Education, 1974. 138 p. (E. McKinney)

425. BIRDSONG, Lark L. The I of movement. M.Ed. in Physical Education, 1974. 42 p. (C. Ulrich)

426. BRESSAN, Elizabeth S. The assessment of classroom teachers' ability to provide quality instruction in movement education for primary grade children. M.S. in Physical Education, 1974. 105 p. (K. R. Barrett)

427. BRUGGER, Sandra D. The personality and movement preference relationships of high school girls affiliated with dance and sport. M.S. in Physical Education, 1973. 181 p. (C. Ulrich)

428. BUHRER, Nance [illegible]. Perceptions of "the woman athlete" and "the woman coach". M.S. in Physical Education, 1973. 156 p. (P. Berlin)

429. BURKE, Maureen E. Journey. M.F.A. in Dance, 1973. 11 p. (V. Moomaw)

430. CANNON, Suzan E. A study of the physical education, intramural, and interscholastic programs in selected independent schools of North Carolina. M.S. in Physical Education, 1974. 182 p. (G. M. Hennis)

431. CLAYTON, Lurah B. The history of the development of elementary school physical education in the Charlotte-Mecklenburg School system. M.S. in Physical Education, 1973. 178 p. (E. Umstead)

432. CORDELL, Lynn Virginia. The effect of the straight approach and the angular approach upon accuracy of the volleyball spike. M.S. in Physical Education, 1974. 63 p. (G. Hennis)

433. CRAIG, Savannah R. Four women. M.F.A. in Dance, 1974. 16 p. (V. Moomaw)

434. CRAVEN, Martha J. Constructus. M.F.A. in Dance, 1975.

435. CROSS, Sandra K. An investigation of attitudes toward the concept of death in a university student population. M.Ed. in Health Education, 1974. 71p. (R. Vincent)

436. DAVIS, Pamela N. Crochet. M.F.A. in Dance, 1974. 21 p. (V. Moomaw)

437. DAVIS, William E. A study to determine the best floor locations for obtaining rebounds of basketball jump shots. M.Ed. in Physical Education, 1973. 43 p. (F. Pleasants)

438. DELATTRE, Susan B. Wildwood permutations. M.F.A. in Dance, 1973. 32 p. (V. Moomaw)

439. DICKEY, Wanda L. Silver apples of the moon. M.F.A. in Dance, 1973. 7 p. (V. Moomaw)

440. DROUIN, Denis. Classical reaction time and anticipation reaction time in a simple visual reaction time task. Ed.D. in Physical Education, 1973. 93 p. (G. Hennis)

441. DWYER, Ann Marie. Fusion. M.F.A. in Dance, 1975. 25 p. (L. Andreasen)

442. FLEMING, Rhonda K. A history of the department of physical education at Winthrop College. M.S. in Physical Education, 1973. 138 p. (E. Umstead)

443. GERMAIN, Dorothy P. Ellen Griffin—A creative personality. M.S. in Physical Education, 1974. 73 p. (C. Ulrich)

444. GLOVER, Elizabeth G. A motor creativity test. Ed.D., 1974. 309 p. (G. Hennis)

445. GORDON, Sandra Jane. A movement concept scale for junior high school students. M.Ed. in Physical Education, 1973. 72 p. (R. McGee)

446. HOLDER, Franklin D. Noga syksnivarts. M.F.A. in Dance, 1972. 9 p. (V. Moomaw)

447. HOLLAND, Claudia Jean. Out of the dark. M.F.A. in Dance, 1974. 63 p. (V. Moomaw)

448. HUDGENS, Vivian A. Attitudes toward physical activity and self-perceived body image of selected black high school women. M.Ed. in Physical Education, 1975. 81 p. (R. McGee)

449. HUDSON, Agnes S. An investigation of skill test items as measures of golf playing ability. M.S. in Physical Education, 1973. 71 p. (R. McGee)

450. JAFFIE, Charlene K. Attitudes of selected high school boys towards girls playing on boys' interscholastic teams. M.S. in Physical Education, 1973. 104 p. (C. Ulrich)

451. KAATZ, Doris M. Psychological anxiety of members of selected intercollegiate athletic teams. M.S. in Physical Education, 1973. 211 p. (P. Berlin)

452. KANGLEON, Fredeswinda. Development of a course outline in family life and sex education for prospective elementary teachers at the University of the Visayas, Cuba City, Phillippines. M.Ed. in Health, 1973. 76 p. (M. Solleder)

453. KARPS, Carol A. A study of the relationship of selected physical strength factors to success in executing a quality overhead pass in volleyball for seventh grade girls. M.S. in Physical Education, 1973. 53 p. (F. Pleasants)

454. KICH, Larry M. Performance of a novel task under two conditions of anxiety. M.S. in Physical Education, 1974. 108 p. (P. Berlin)

455. KIERNAN, Leslie J. Motor creativity, movement concept, and motor ability of college freshmen women with high and low motor ability. M.S. in Physical Education, 1974. 75 p. (G. Hennis)

456. LEWIS, Jane B. An analysis of the feminine image and various sport images of competitive college women swimmers. M.S. in Physical Education, 1974. 97 p. (R. McGee)

457. LINDER, Susan A. Hand preference in the acquisition of beginning fencing skill. M.S. in Physical Education, 1975. 73 p. (P. Loeffler)

458. LUNT, Joanne M. A procedure for systematically describing teacher-student verbal and non-verbal interaction in the teaching of choreography. Ed.D. in Physical Education, 1974. 271 p. (K. Barrett)

459. LYONS, Sherry K. Some day—I'm goin' sing. M.F.A. in Dance, 1972. 17 p. (V. Moomaw)

460. MARTIN, Peggy Elizabeth. Expectations of women collegiate athletes regarding coaching style. M.S. in Physical Education, 1974. 114 p. (P. Berlin)

461. MC CUTCHEN, Brenda P. S. Umbo Suite. M.F.A. in Dance, 1973. 16 p. (V. Moomaw)

462. MC LEOD, Gary L. Recreational Activities of undergraduates at the university of North Carolina at Greensboro. M.Ed. in Physical Education, 1974. 136 p. (P. Berlin)

463. MALIZOLA, Florence Theresa. The teaching of badminton skills to the adolescent: traditional vs. programmed. Ed.D. in Physical Education, 1974. 346 p. (C. Ulrich)

464. MULVIHILL, Rosemary A. A two-line wall volley test as a measure of volleying ability of high school girls. M.Ed. in Physical Education, 1972. 65 p. (G. Hennis)

465. NEIKIRK, Mary M. Development of a college beginning swimming course which possesses selected characteristics of humanistic education. M.S. in Physical Education, 1974. 116 p. (K. Barrett)

466. PAFFORD, Joan M. Attitudes toward physical activity held by selected students and secondary school teachers of the Greensboro public schools system. M.S. in Physical Education, 1974. 148 p. (P. Berlin)

467. PARATORE, Jean. Superstitions of athletes. M.Ed. in Physical Education, 1974. 76 p. (P. Berlin)

468. PAYNE, Harriet. Peopledance in midstream. M.F.A. in Dance, 1974. 25 p. (V. Moomaw)

469. PIKE, Herbert Franklin. Cinematographical analysis of wrist action and leading arm extension of two baseball batters, comparing a power hitter with a punch hitter. M.Ed. in Physical Education, 1973. 87 p. (F. Pleasants)

470. POWELL, Ruth A. Anomaly. M.F.A. in Dance, 1974. 17 p. (V. Moomaw)

471. REESE, Carol A. A cinematographical analysis of two selected methods of drawing the bow. M.S. in Physical Education, 1973. 59 p. (F. Pleasants)

472. RICHARDSON, Elizabeth L. Environ. M.F.A. in Dance, 1975. 51 p. (L. Andreasen)

473. RUNDIO, Stephen J., III. The history of the first one hundred years of physical education at Guilford College. M.Ed. in Physical Education, 1973. 123 p. (E. Umstead)

474. SCHNABL, Elizabeth A. Relationships between children's space utilization, field dependence, and body image boundary. M.S. in Physical Education, 1973. 64 p. (P. Berlin)

475. SIEGEL, Donald S. The nature and significance of the response latency associated with the amendment of movements of varying complexity. Ed.D. in Physical Education, 1975. 122 p. (P. Berlin)

476. SINGH, Kuldip K. Celestial celebration. M.F.A. in Dance, 1974. 103 p. (V. Moomaw)

477. SMITH, John W., II. A cinematographic analysis of a baseball batter's swing. M.Ed. in Physical Education, 1972. 40 p. (F. Pleasants)

478. SNODGRASS, Jeanne E. Comparisons and relationships of selected measures of self-concept in primary age children. Ed.D. in Physical Education, 1975. 143 p. (R. McGee)

479. SNYDER, Beverly W. A manual of volleyball drills arranged in a hierarchy of complexity. M.Ed. in Physical Education, 1974. 147 p. (M. Riley)

480. TURNBULL, William I. The construction of a basketabll official's test presented by videotape. M.S. in Physical Education, 1974. 119 p. (G. M. Hennis)

481. UPSHAW, Kathryn J. John Updike and Normal Mailer: Sport inferences. M.S. in Physical Education, 1972. 125 p. (C. Ulrich)

482. UTTER, William D. Effect of selected preparatory and response signal durations on reaction time task. Ed.D. in Physical Education, 1974. 67 p. (E. McKinney)

483. WASMUTH, C. Suzanne. The effects of a coeducational environment on the volleyball skill development of ninth grade girls. M.S. in Physical Education, 1974. 74 p. (G. Hennis)

484. WIKLE, Kathy S. Nebula. M.F.A. in Dance, 1973. 25 p. (V. Moomaw)

485. WILLCOX, Diane E. A description and analysis of the behavior of two experienced teachers initiating the movement education approach to teaching beginning basketball to college women. M.S. in Physical Education, 1975. 211 p. (K. Barrett)

486. WYCHULES, Michael V. Drug knowledge and selected sociological factors among high school students. M.Ed. in Health, 1973. 98 p. (C. L. Warren)

487. YOW, Sandra K. A study of the reasons for continuing or not continuing post-high school participation in basketball by all-conference women players. M.Ed. in Physical Education, 1974. 74 p. (G. Hennis)

UNIVERSITY OF NORTHERN COLORADO (MARY A. BEHLING)
GREELEY, COLORADO

488. ATTACHOC, Anan. Blood lactate during intermittant and continuous exercises. Ed.D. in Physical Education, 1975. 72 p. (R. Peterson)

Post exercise blood lactate levels were compared between 5 different exercise protocols (prs) on 16 male Thai students ages 17 to 28. All exercise sessions were conducted on a Quinton Monark bicycle ergometer. The 5 exercise prs were: 1) progressive, multi-level $\dot{M}VO_2$ test; 2) continuous exercise at 85% $\dot{M}VO_2$ for 10 min; 3) intermittant exercise at work: rest ratio of 1:1 (15 sec work : 15 sec rest), workload 170% $\dot{M}VO_2$, duration

10 min; 4) intermittant exercise at work:rest ratio of 1:1 (30 sec work:30 sec rest), workload 170% $\dot{M}VO_2$ and duration 10 min; and 5) intermittant exercise at work:rest ratio of 1:2 (15 sec work:30 sec rest) workload 170% $\dot{M}VO_2$, duration 15 min. Data were analyzed with ANOVA and a Sheffé test. Lactate levels were significantly increased above resting levels in all 5 exercise prs. Pr4 produced the highest level (88 mg%) followed in order by pr1 (84 mg%), pr3 (74 mg%), pr2 (65 mg%), and pr5 (50 mg%). The completion of a given amount of work on an intermittent basis offered no advantage over completing the same amount of work on a continuous basis, at least for the exercise intensities, durations, and Ss of this study, as far as the production and removal of lactate are concerned.

489. CONNERS, William. The comparative effects of set and interval circuit weight training systems on musuclar strength, cardiovascular endurance, and selected anthropometric measures of college men. Ed.D. in Physical Education, 1975. 62 p. (R. Montgomery)

490. MELCHER, Nancy. The relationship between parental and student attitudes toward physical activity and the motor ability of high school girls. Ed.D. in Physical Education, 1975. 127 p. (G. Sage)

491. SCULLY, Brian C. Effects of variation in Diet and intensity of exercise on blood lactate levels and performance time. Ed.D. in Physical Education, 1975. 166 p. (R. Peterson)

To determine the effects of diet on time to fatigue, 12 males, ages 23 to 36, received 3 dietary treatments: low carbohydrate (CHO), high CHO and normal mixed (NM), and performed 2 workouts on a motor-driven treadmill at intensities of 85% and 100% $\dot{M}VO_2$ for 5 min or until exhausted. Data were analyzed by treatment X levels X Ss' ANOVA and Scheffé multiple comparison techniques. All Ss completed the full 5 min at 85% $\dot{M}VO_2$. Lactate levels were moderately elevated but no differences were observed between the 3 dietary treatments. $\bar{X}$ times to exhaustion at 110% $\dot{M}VO_2$ were 200 sec (hiCHO), 194 sec (NM), and 187 sec (loCHO). These differences were statistically significant ($p < .05$). $\bar{X}$ lactate levles at 110% $\dot{M}VO_2$ were 109 mg% (hiCHO), 86 mg% (loCHO), and 84 mg% (NM). The high value was statistically higher than the other two ($p < .05$) but no difference existed between the lower values. Initial glycogen levels may supercede lactate accumulation and subsequent pH imbalances as a factor contributing to exhaustion at the work intensities and durations used in this investigation.

492. WILLIAMS, Timothy. The relative energy contributions of oxidative and glycolytic metabolic processes at different back-pack loads and different oxygen tensions. Ed.D. in Physical Education, 1975. 91 p. (J. Barham)

UNIVERSITY OF OREGON (E. R. REUTER)
EUGENE, OREGON

493. BAER, Clarence L., Jr. Chronic exercise, 2,3-Diphosphoglycerate concetration and hemoglobin electrophoretic patterns in laboratory rats. Ph.D. in Physical Education, 1975. 77 p. (J. Broekhoff)

Male Wistar rats (N=28) with $\bar{X}$ body wt of 529±7.58 gm ($\bar{X}$±S.E.M.) were randomly grouped into zero (N=8), control (N=8) and exp. (N=12) groups. The zero group was sampled at the start of a 6 wk conditioning program while the control and exp. groups were measured on the same variables at the end. The conditioning program for the exp. group consisted of 1 hr of swimming in the dark every other day while carrying from 2-8% of body wt. Planned comparisons were conducted to test the hypotheses that chronic exercise will cause changes in resting 2,3DPG and changes in hemoglobin electrophoretic bands. The exp. group animals gained 6.8% of initial body wt. while the control group gained 13.3% ($p < 0.001$). There was no differences in (Hb), PCV, whole blood pH, pO_2, and pCO_2. Enzymatic measurement of 2,3-DPG yielded values of 1.48±0.05, 1.20±0.11, and 1.17±0.06 moles DPG/moles Hb for the zero, control and exp. groups respectively. (2,3-DPG) or hemoglobin electrophoretic bands did not change due to the exercise stress.

494. BENNETT, Ian C. A model for planning and operating physical education/recreation facilities based upon community education ideology. Ph.D. in Physical Education, 1975. 233 p. (B. McCue)

A planning and operating model was developed for Victoria, Australia based upon a foundation study involving a survey of Victorian PE/REC school facilities (N=350), and a North American survey of significant community school (CS) facilities (N=168) and opinions of resource personnel (N=208) involved with jointly planned and operated CS facilities. Based on the study's findings, a planning and operating model was proposed for implementation in Victoria.

495. CARROLL, Sister Margaret M. A history of the evolution and early development of the School of Physical Education at the University of Oregon 1894-1937. E.Ed. in Physical Education, 1975. 360 p. (B. McCue)

The evolution and early development of the School of PE at the Univ. of Oregon was traced from the appointment of the first

director in 1894, Joseph Wetherbee, through the termination of service of the first dean, John Bovard, in 1937.

496. HAGAN, R. Donald. The effect of exhaustive swimming of varying durations on the myoglobin content of rat cardiac and skeletal muscle tissue. Ph.D. in Physical Education, 1975. 90 p. (E. Evonuk)

Heart and gastrocnemius muscle myoglobin contents were compared in controls, and rats swum to exhuastion for 3, 6, 9, 12, and 15 wk. Significant differences were found for the change of body, heart, gastrocnemius, relative heart, and relative gastrocnemius wt with time; for the change of heart myoglobin and total protein contents with time; and for the change of gastrocnemius myoglobin and total protein contents, and the myoglobin-total protein ratio with time. In addition, significant differences were found between the control and exercised animals for body, gastrocnemius, relative heart and relative gastrocnemius wts, and for the myoglobin content and myoglobin-total protein ratio of the gastrocnemius.

497. SOUCIE, Daniel. An analysis of the perceived actual and ideal profile of organizational characteristics of physical education departments in the colleges of Quebec. Ph.D. in Physical Education, 1975. 196 p. (B. McCue)

An adapted version of Likert's Profile of Organizational Characersitics was used to obtain department heads' and teachers' (N=214) perceptions of the actual (present) and ideal (desired) organizational climate of college PE departments. The 50 item questionnaire yielded a management system profile and measured 8 organizational variables: leadership, motivation, communication, interaction-influence, decision-making, goal setting, supervision, and professional preparation and training. The sample of eligible PE departments included 74.5% of the colleges in the province. Significant differences ($p < .01$) were found between teachers' actual and ideal responses and between department leaders' actual and ideal responses; between teachers' and department leaders' actual responses for the communication and decision-making variables, and between public and private college teachers' actual responses for the 8 variables ($p < .05$). No significant differences ($p > .05$) were found: between teachers' and leaders' ideal responses, between male and female teachers' responses, and between the responses of teachers with a varying number of yrs of schooling.

498. TUCKER, Richard C. Self-concept and physical achievement: Comparisons between high school boys in an ability-grouped versus a traditional physical education program. Ed.D., 1975. 95 p. (J. Broekhoff)

Gordon's "How I See Myself" Scale was used to assess the self-concept of 270 boys in Bakersfield, Calif. "Ability" was determined by results on a physical fitness test battery. High, median, and low ability groups, grades 10, 11, and 12, and ability grouped vs. heterogeneous grouped PE classes produced a 3 X 3 X 2 factorial design with 15 Ss/cell. A 3-way ANOVA was applied to each of the 9 factors identified by Gordon's Scale as components for the self-concept. There were no differences in self-concept between the low-ability boys in the 2 schools. A positive relationship was indicated between self-concept and ability for the Physical Adequacy factor, and high-ability boys were more positive in self-concept than boys of low ability with respect to the Emotions factor. Regarding grade level, low-ability sophs. were more negative in self-concept than comparable jrs. and srs. for the Physical Adequacy factor. Differences at all the other self-concept factors did not reach the .05 level of significance. The nature of the PE program did not appear to significantly affect self-concept.

UNIVERSITY OF TEXAS AT EL PASO (D. HARDIN)
EL PASO, TEXAS

499. WEDEL, John R. The vertical forces generated by the straddle and flop styles of high jumping. M.S. in Physical Education, 1975. (D. Hardin)

Force and time of take-off between the flop and the straddle styles of high jumping were compared. Ss were 10 high jumpers who could jump equally well as flop-style jumpers or as straddle-style jumpers. All data from the 10 Ss were gathered with Ss grouped. Group I jumped straddle first and Group II jumped flop first. The data gathered were impact force, take-off force, impact time, and total time of jump. The results of the testing showed that the $\bar{X}$ flop takeoff force was 270.9 lbs. as compared to the $\bar{X}$ straddle takeoff force of 224.0 lbs. The test also showed that the $\bar{X}$ flop take-off time was .12 sec as compared to a $\bar{X}$ straddle take-off time of .15 sec. The flop style of high jumping provides a quicker, more powerful take-off than does the straddle style of high jumping.

UNIVERSITY OF UTAH (ROBERT O. RUHLING)
SALT LAKE CITY, UTAH

500. ALLSOP, Kent G. Comparative investigation of electrical potential of the iliopsoas and rectus abdominis muscles during performance of selected activities. Ph.D. in Health Science, 1974. 70 p. (N. Randall)

501. Andrews, Barry C. Physical fitness levels of Canadian and South African school boys. Ph.D. in Physical Education, 1975. 93 p. (R. Ruhling)

502. BRUCKNER, John F. Personality traits of male university students voluntarily enrolled in selected physical education activity courses. M.S. in Physical Education, 1975. 83 p. (L. Griffin)

503. BURRUS-BAMMEL, Lei L. The volley method versus the ground stroke method of teaching beginning tennis. Ph.D. in Physical Education, 1975. 82 p. (B. West)

504. CHRISTENSEN, Renee. Certain effects of the school breakfast program on student performance in three Salt Lake City elementary schools. M.S. in Nutrition Science, 1973. 43 p. (L. Pettit)

505. CRYER, Dennis C. An assessment of the effects of health education modalities of hypertension clinic outpatients. Ph.D. in Health Science, 1975. 139 p. (M. Kreuter)

506. CURTIS, John D. The effects of educational intervention on the Type A behavior pattern. Ph.D. in Health Science, 1974. 162 p. (M. Kreuter)

507. DE MEERSMAN, Ronald. The effects of seven weeks of judo instruction on selected physiological parameters. M.S. in Physical Education, 1975. 53 p. (R. Ruhling)

508. DREHER, Edward R. The effects of hatha yoga and judo on personality and self-concept profiles on college men and women. Ph.D. in Physical Education, 1973. 99 p. (J. Ewers)

509. ENRIGHT, Ronald A. Balance testing mentally retarded children. M.S. in Leisure Studies, 1974. 61 p. (J. Moran)

510. FORD, Marilyn H. Determining significant structural variables in coronary care unit mortality. M.S. in Health Science, 1975. 51 p. (R. Dwore)

511. FRANKLIN, Dixie L. The differences and relationships between attitudes and knowledge awareness toward girls' physical education activities among administrators, faculties, parents, and students at selected junior high shools. Ph.D. in Physical Education, 1975. 84 p. (L. Griffin)

512. HALL, Judith B. Preparing beginning judges of women's gymnastics. Ph.D. in Physical Education, 1975. 208 p. (L. Griffin)

513. HANSON, James L. Legal implications of liability for negligence torts in the leisure profession. Ph.D. in Leisure Studies, 1975. 308 p. (L Cruse)

514. HEINRICHS, Ronald D. Personality traits of selected collegiate golfers. Ph.D. in Physical Education, 1975. 79 p. (K. Henschen)

515. HERNANDEZ, Mike A. A comparative study of attitudes toward athletics as expressed by Mexican American and non-Mexican American high school boys. Ph.D. in Physical Education, 1975. 140 p. (K. Henschen)

516. HILL, Janeen M. A comparative study of student awareness with United States Forest Service recommended methods of wilderness conduct. M.S. in Leisure Studies, 1975. 79 p. (L. Cruse)

517. HIRST, Cyntha A. C. The effects of three motor activity programs on academic achievement of kindergarten children. Ph.D. in Physical Education, 1973. 50 p. (B. West)

518. ISROW, Denis F. Investigation of instrument measuring on fitting football shoes. Ed.D. in Physical Education, 1975. 65 p. (R. Ruhling)

519. KEEVER, Billy D. Health education in health maintenance organizations. Ph.D. in Health Science, 1975. 140 p. (R. Dwore)

520. KIMBALL, Michael H. Computerized analysis of selected gymnastic judges. M.S. in Physical Education, 1974. 50 p. (L. Anderson)

521. KOLLER, Ronald D. The availability and extent of use of public school facilities for community recreation in Alabama. Ph.D. in Leisure Studies, 1973. 219 p. (L. Rockwood)

522. LANGMAN, Robert R. Development of a commercial recreation curriculum. Ph.D. in Leisure Studies, 1974. 164 p. (L. Rockwood)

523. LOY, Russell S. Effects of "the 30 Scholarship Rule". M.S. in Physical Education, 1975. 69 p. (K. Henschen)

524. MADSEN, Steven E. Student perceptions of college level health education. M.S. in Health Science, 1975. 72 p. (M. Kreuter)

525. MC DOWELL, Chester, F., Jr. A suggested leisure counseling model: Its use and effectiveness in a therapeutic community. Ph.D. in Seisure Studies, 1975. 171 p. (L. Rockwood)

526. MILLER, Millard R. A comparative analysis of health care perceptions for Western Nevada Indians. M.S. in Health Science, 1975. 54 p. (M. Kreuter)

527. NEELEY, David G. A biography of John L. Squires: Athlete, educator and humanitarian. M.S. in Leisure Studies, 1975. 137 p. (L. Rockwood)

528. NEWMAN, Margie R. P. Impact of nutrition education on low income homemakers in Salt Lake County. M.S. in Health Science, 1975. 83 p. (L. Griffin)

529. NIELSON, Mark W. Breathing techniques for American crawl swimming. M.S. in Physical Education, 1975. 48 p. (K. Henschen)

530. PACKER, Thane J. Interests and values of Latter-Day Saint adolescent males. Ed.D. in Leisure Studies, 1974. 213 p. (J. Squires)

531. PALMER, Alan. A morbidity survey of respiratory symptoms and functions among Utah beauticians. Ph.D. in Health Science, 1975. 164 p. (R. Ruhling)

532. PASKERT, Catherine J. Effectiveness of the University of Utah School on Alcoholism and other drug dependencies. Ph.D. in Health Science, 1974. 196 p. (M. Kreuter)

533. SAVAGE, John B. A biography of Bernice R. Moss: Educator, pioneer, author. Ph.D. in Health Science, 1975. 294 p. (I. Grosshans)

534. SQUYRES, Wendy D. The influence of the social seminar on selected in-service health educators. Ph.D. in Health Science, 1975. 147 p. (M. Kreuter)

535. SUTTON, Robert G. Functions and professional preparation of men intercollegiate athletic directors. Ph.D. in Physical Education, 1975. 133 p. (O. Hunter)

536. TURNER, Lisa M. Life satisfaction of participants in a community orientation program for nursing home residents. M.S. in Leisure Studies, 1975. 63 p. (J. Moore)

537. TWARDOKENS, George R. Torques exerted by rotations of the lower extremity. Ph.D. in Physical Education, 1975. 125 p. (L. Griffin)

538. WADSWORTH, Beverly A. A comparison of the writings of Clark W. Hetherington and John Dewey. Ph.D. in Physical Education, 1975. 215 p. (N. Neilson)

539. WEBER, Nita B. A history of health care at the Navajo Lutheran Mission, Rock Point, Oregon 1953-1974. M.S. in Health Science, 1975. 130 p. (M. Kreuter)

UNIVERSITY OF WASHINGTON (T. L. DOOLITTLE)
SEATTLE, WASHINGTON

540. SUZUKI, Shuji. Motoneuronal discharge due to muscle afferent activation following isometric contraction. M.S. in Physical Education, 1975. 52 p. (R. Hutton)

A spinal segmental motoneuronal counterpart of postcontraction sensory discharge (PCSD) was investigated in lightly anesthetized, partially denervated cats. Motoneurons (N=62) were isolated from L7 ventral root filaments, functionally categorized according to their response to triceps surae stretch, and monitored before and after contraction. Of 37 motoneurons excited by stretch (MN-S+), 70% increased their firing discharge, 3% decreased, and 27% showed no change after contraction; of 6 units of motoneurons inhibited by stretch (MN-S^-), 3 units increased, 2 decreased, and 1 exhibited no change after contraction; in motoneurons not influenced by stretch (MN-S^o) and motoneurons showing mixed or unpredictable responses to stretch (MN-S^m), 14 out of 19 units showed no change. Correlated t-tests showed that only the MN-S+ group showed a significant change (<.01 level) in discharge 5 sec after contraction as compared to the MN-S^-, MN-S^o, and MN-S^m groups. In the MN-S+ group, 65% were found to be tonic motoneurons and 35% showed phasic and mixed phasic-tonic firing characteristics. This indicates that the phenomenon of PCSD which has been previously shown to be subserved by stretch receptors might serve to regulate ongoing performance in a facilitatory capacity. The functional equivalency of PCSD is not unlike the phenomenon called "postural persistence" or "after-contraction" commonly observed in human behavior. (Supported by BSSG, RR-07096, NIH and GSRF)

UNIVERSITY OF WESTERN ONTARIO (A. V. CARRON)
LONDON, ONTARIO, CANADA

541. AITKEN, Elizabeth. Female strength development, 7 through 15 years. M.A. in Physical Education, 1975. 87 p. (A. Carron)

A mixed longitudinal sample of 42 girls was tested on 7 individual isometric strength measures over an age range 7-15 yr. As well as the individual measures, 3 derivative measures were formed: upper, lower and composite strength. The study described growth and development of female strength, examined the strength-stature relationship, and analyzed individual differences in strength. Strength increased 7-15 yr and developed in a regular pattern. Specifically, increments were generally constant over the first 6-7 yr, followed by a sharp decline, in turn followed by the greatest strength increment. Growth curves were characteristically linear in trend. As well, a pattern of increment with respect to the onset of menstruation was noted. Lower and composite strengths showed periods of max increment within the yr following menarche, Upper strength showed a period of max increment 1 yr preceding the of menarche. A small but significant strength-stature relationship was found. Further, individual differences in female strength demonstrated relatively high yr to yr stability. However, low generality of female strength was noted.

542. BAKA, Richard. PARTICIPaction: An examination of its role in promoting physical fitness in Canada. M.A. in Physical Education, 1975. 201 p. (D. Semotiuk)

Using a descriptive methodology comprising basic library research, documentary and record analysis, personal correspondence, personal interviews and personal observations, the study was divided into three major areas, each dealing with one of the sub-problems examined: a description of PARTICIPaction in the areas of historical background, objectives, name development, organizational structure, strategy, programs and services; the role of PARTICIPaction in the nation's delivery system of physical fitness services; and an interpretation and discussion of the Company in terms of objectives, name, organizational structure, strategy, programs, services and, on a broader level, complicating factors, achievements and prospects for the future. A no. of conclusions were made.

543. BIRD, Larry. Student support for the intercollegiate athletics programmes at the University of Western Ontario. M.A. in Physical Education, 1975. 75 p. (B. Petrie)

The level of support (1970-71) was determined by analysis of perceived functions and attitudes expressed by the student community. Levels of support were examined in association with

the independent variables of: frequency of attendance at intercollegiate competition as a spectator; level of personal participation in sport; yr of study in the University; sex of the respondent; and population size of the respondent's home town. A questionnaire was mailed to 1,157 Ss selected by systematic random sampling. A total of 826 Ss returned their questionnaires (71.39%). A positive level of support for the intercollegiate athletics programmes existed among the student community. This positive level of support was higher among: students who frequently spectate at intercollegiate athletic competitions; students who participated in sport; and in females as contrasted with males. This positive level of support was not differentiated between intercollegiate athletes and recreational participants; between students registered in differing yr of study at the University; or between respondents from home towns of varying population size.

544. BLIMKIE, C. Joseph. Hockey induced stress as reflected by urinary catecholamines in young boys and men aged 10 to 23 years. M.A. in Physical Education, 1975. 120 p. (D. Cunningham)

Stress experienced by young athletes (11-to 23-yr-old) in competitive ice hockey was studied by comparing urinary epinephrine (E) and norepinephrine (NE) excretion during bicycle exercise (55% max) and a game. Athletes were divided into 4 groups: 8 11-yr-olds; 4 12-, 16-and 23-yr olds. Urinary production rates were similar during rest, submax. exercise and hockey game conditions. Rest E and NE values were similar across all ages. During hockey, E excretion was significantly elevated above rest (+287-829%) in the 12-, 16-and 23-yr-old groups and was significantly elevated above submax exercise in the 16- and 23-yr old athletes. Age comparisons indicated that E excretion during hockey was significantly higher in the 16-and 23-yr-old athletes than the 11-and 12-yr-old boys. Physical stress, as reflected by NE excretion, was similar across all ages. NE excretion rates during hockey were significantly elevated above rest (+179-536%) and submax. exercise in all groups. Sympathetic stimulation appeared to be related to exercise level and constant across ages 11-to 23-yr, whereas the adrenal medullary response was age dependent and significantly higher in the older athletes.

545. CELLI, Peter. Game preferences of elementary school children. M.A. in Physical Education, 1975. 76 p. (B. Petrie)

Lists of game preferences for grades 4, 5, 6, 7, and 8 were compiled in the following categories: summer outdoor activities; winter outdoor activities; indoor activities; and most favoured activities. Other areas of investigation were the

preferences for summer or winter activities, outdoor or indoor activities, rough or non-violent activities, and team or individual activities. The influence of sex and grade on these criteria was studied. A total sample of the grade 4-8 ELE student population of Kirkland Lake was used (N=1,556, 801 males and 755 females). Data were collected using a group administered questionnaire. The following conclusions were drawn: hockey and skating were the most popular winter outdoor activities of males and females respectively; the most frequently endorsed summer outdoor activity for both sexes was baseball; in their endorsements for indoor activities, both sexes demonstrated a shift in choices from hobbies and pastimes to more organized and competitive games; the most favoured games of males included baseball, hockey, football and soccer while females endorsed skipping, skating, swimming, and in the later grades, baseball and volleyball; both sexes deomonstrated a greater preference for summer activities over winter activities outdoor activities over indoor activities, and team activities over individual activities; and boys preferred rougher activities, following grade 6 while girls preferred activities which were not rough.

546. KINDER, John. A description of aerobic and anaerobic energy metabolism during a short exhaustive run on the treadmill. M.A. in Physical Education, 1975. 93 p. (D. Cunningham)

Energy production and changes in energy production by the aerobic, lactacid and alactic systems during a short exhaustive run on the treadmill were studied. Ss were 5 male volunteers, age 23-33 yr. The alactic system was the initial energy source and the main contributor (85%) during the first 51 sec and appeared to approach exhaustion by the 25 sec mark. Lactic acid levels were slightly elevated during the first 15 sec of exercise; continued to increase for 75 sec and appeared to decrease just prior to exhuastion at 90 sec. The contribution of the aerobic system to the total energy production increased for the 1st 45 sec., decreased to the 75 sec mark and then increased again just prior to exhaustion. Changing energy cost of the run or efficiency, blood pH levels or the selection of red or white muscle fibers during exercise were suggested as possible reasons for the oscillating behavior of the aerobic and lactacid systems. The relative % contributions of the 3 energy sources to the total energy production were calculated as follows: aerobic 51%; lactacid 32%; and alactic 17%.

547. LINDLEY, Colleen. The effects of a program of training on cardiovascular response to exercise in post myocardial infarct patients. M.A. in Physical Education, 1975. 56 p. (D. Cunningham)

Ss, 25 post myocardial infarct patients, were randomly assigned to 2 groups which differed only in the intensity and frequency of exercise. Factors such as hypertension, angina, personality (type A or B) and group therapy effect were controlled for by the design. The vigorous exercise group met regularly in a program of endurance type activity. For the first 4 mo of the study, the vigorous exercise group met formally twice a wk. During the remainder of the study they met only once a wk but were required to exercise at least once a wk on their own. The light exercise group met formally an equal number of times in a program of relaxation exercises and games but were not required to exercise on their own. Due to attrition there were 5 men in each of the 2 groups at the end of the 12 mo period. Before and after the 12 mo period of activity the patients were tested on a bicycle ergometer. The measured $\dot{M}VO_2$ of the vigorous and light exercise groups increased by 29% and 13.7% respectively. Max cardiac output was elevated by 10% in the vigorous group but by only 1.8% in the light exercise group. The max SV of the vigorous and light exercise groups increased by 18.2% and 9.35% respectively. Max arteriovenous O_2 difference was elevated by 13.4% in the vigorous group buy by only 7.4% in the light exercise group. When compared with the control group, measures of cardiovascular efficiency showed more improvement in the vigorous exercise group than in the light exercise group.

548. PATERSON, William. A descriptive study of experienced, novice and trainee physical education teachers using interaction analysis. M.A. in Physical Education, 1975. 82 p. (G. Wearring)

This study described, analyzed and compared the behavioral interaction patterns of experienced, novice and trainee male PE teachers using the Cheffers (CAFIAS) Adaptation of the Flanders (FIAS) Interaction Analysis System. Ss were 10 trainee, 10 novice, and 10 experienced male PE teachers in southwestern Ontario. Ss were required to teach a skill or fundamental technique in the sports or game area, e.g., a volleyball or wrestling skill, using the teaching method they would normally employ. The lessons were video-taped for coding and analysis using the CAFIAS observational instrument. The results indicated that: there were no differences between the 3 groups in their instructional interaction pattern; further, there were no differences between the groups in either teacher behavior variables, learner behavior variables, or class control and motivation variables. Finally, there were differences among the groups in the amount

of time the classes spent working as a whole or in smaller groups or as individuals. In particular, the classes of the novice Ss spent significantly less time working as a whole than did the classes of the trainee Ss. Within the limitations of this study it appears that there is little or no relationship between teaching experience and the instructional interaction patterns of male PE teachers.

549. SMITH, Neil. A cinematographic study of the gymnastic sequence handstand, late drop, cast to under-arm support on the parallel bars. M.A. in Physical Education, 1975. 78 p. (G. Leyshon)

Film of a proficient and less proficient performance of the gymnastic sequence handstand, late drop, cast to under-arm support on the parallel bars was analyzed in order to mechanically describe and explain the proper execution of the movement. Center of gravity locations were determined using the segmentation method. Lines were drawn joining the center of gravity to the principle axes of rotation. Average angular velocity was calcuated by comparing the amount of rotation of a line about its respective axis against the no. of frames needed to complete that rotation. Average velocity was expressed in degrees/sec. Measurement of angular velocity was also taken of selective joints in order to provide a more complete description. The results indicated that forward shoulder lean, as the gymnast descended from the handstand, was beneficial in achieva position of dynamic balance; max hip flexion during the upward swing was useful in attaining elevation above the parallel bars; elevation above the bars during the cast motion was acquired by rapid, but short, leg extension with a coordinated vigorous arm pull; and a regrasp position above the parallel bars after the cast puts a gymnast in a good position for the successful execution of subsequent movements.

550. VAN BEEK, Evert. Effects of reducing intramuscular temperature on delaying the onset of fatigue: An electromyographical analysis. M.A. in Physical Education, 1975. 75 p. (G. Leyshon)

This exp. determined the effects of localized cryotherapy in delaying the onset of muscular fatigue and compared EMG patterns of selected quadriceps muscles during active exercise to fatigue. The volunteer, post-operative menisectomy patients were used in this investigation. Each was required to perform resisted knee extensions to fatigue under 2 temp. conditions: normal (no treatment) and cold after 10 min of ice application. Resistance was determined at 50% of 1 max voluntary contraction. Muscle action potentials (MAP) of the vastus medialis and rectus femoris muscles were monitored throughout the exercise routines. MAP amplitudes were compared at 25% time increments under the 2

conditions. Results indicated that Ss worked an average of 37% longer after the 10 min ice application. No significant difference in the MAP of the 2 muscles was found between the 2 test conditions. MAP changes with respect to work time, however, showed increases after the 50% time interval. No statistical confirmation for the observed patterns in the rectus femoria muscle could be made.

UNIVERSITY OF WISCONSIN (C. H. DE VOLL)
LA CROSSE, WISCONSIN

551. BAUMANN, Gary. A study of relationship between ability and agility in the game of tennis. M.S. in Physical Education, 1975. 30 p. (C. DeVoll)

The investigation utilized the tennis team (N=30) at Wausau, Wisc. East High School. The Scott Obstacle Race was used to test the agility, and a challenge ladder system took place to determine the ability (performance) ranking of the Ss. The Spearman rank order coefficient of correlations was computed to determine whether or not a positive correlation existed between ability and ability (performance) ranking. There was a significant correlation ($p < .05$) between a player's performance ranking and his measured agility and ability.

552. BILL, Alban J. The effect of an off-season skill program on the skill development of high school basketball players. M.S. in Physical Education, 1975. 114 p. (W. Atta)

Male members of a 1975-76 HS basketball squad (N=20) took the AAHPER Basketball Skills Test for Boys as a pre and post-program test battery, with Ss placed into 3 treatment groups with high and low skill level Ss in each group. Group I (control) played basketball for 1 mo within normal playing pattern. Group 2 played 45 min/day, 5 days/wk, for 1 mo. Group 3 (exp.) was provided with 45 min of individualized daily lessons designed to improve deficient skill areas. ANOVA was used to test significance between treatment groups, skill levels within each treatment group, and all other interactions between skill and treatment groups. There was no significant difference in gains made in skill areas of dribbling, shooting, or passing when players were not involved in playing basektball within an organized program, no matter what skill level the players were.

553. DILLEY, Jan C. Glycogen packing and its effects upon college swimmers. M.S. in Physical Education, 1975. 49 p. (N. K. Butts)

Designed to determine effects of normal diet and a high carbohydrate-enriched diet on male swimmers who were members of the UW-La Crosse varsity swim team. No. of lengths to be swum in

T_1 and T_2 were determined through a pretest. Following pretest, all 5 Ss were placed on a normal diet for 1 wk. Following T_1, for 1 wk preceding T_2, swimmers were placed on a high carbohydrate diet. For 2-½ days, the diet was protein and fat, and the second part of the wk only carbohydrates were given but also in excess of the normal daily intake. On the high carbohydrate diet, 4 out of 5 improved swimming times over the set distance, but doe to the small no., no statistical significance was reached. The high carbohydrate-enriched diet does have some effect on improving the swimming time of long distance swimmers.

554. DOSCH, Margaret C. The effects of marihuana on specific cardiovascular parameters during exercise. M.S. in Health Education, 1975. 83 p. (R. Hardy)

Examination was made of potential long term effects of marihuana on the cardiovascular system before, during, and after submax exercise. Using 2 samples consisting of 23 computer matched pairs, ages 17 and 21, these specific cardiovascular parameters were utilized for comparison: Resting HR and BP, exercise HR, BP and ECG changes, immediate post-exercise HR, BP and ECG changes at 2, 4 and 6 min intervals and time on the treadmill to reach exercise level of target HR. Ss were solicited from HE and psychology classes offered at UW-La Crosse. Screening and testing procedures were conducted over a period of 2 mo, using paired t-tests. At 4 min post exercise, user's HR was significantly lower than non-users'. At 4 and 6 min post exercise users' diastolic BP was significantly higher than non-users'. Therewere no significant long term effects of marihuana on resting cardiovascular parameters.

555. GAALAAS, Scott A. A comparison of three cardiovascular conditioning techniques for wrestling. M.S. in Physical Education, 1975. 63 p. (P. K. Wilson)

Advantages of supplementary cardiovascular conditioning techniques (traditional running, wrestling only, and "stamina drill") for amateur wrestling were investigated in terms of development of cardiovascular fitness, dynamic, static, and explosive strength and extent flexibility. Members (N=28) of the 1974-75 Prescott HS wrestling team were Ss. As physiological and psychological imitations permitted, initial wrestling fitness was determined during the wk preceding opening of 1974-75 season. Using stratified sample technique, Ss divided into 3 approximately equal groups—traditional running, wrestling only, and stamina drill. Each group followed a different supplementary conditioning program during the last 10 min of each practice throughout the 16 wk season at the conclusion of which each S's wrestling fitness was re-evaluated. ANCOVA and Pearson

r indicated that none of the 3 techniques were significantly different from each other at developing cardiovascular fitness but that those trained in the stamina drill technique showed significantly improved dynamic strength.

556. HOEFFER, June A. The effects of a jogging program on selected strength measures in junior high school girls. M.S. in Physical Education, 1975. 226 P. (W. Kaufman)
Used 28 female Ss from Washington JHS to determine effects of jogging on endurance, leg strength, back, abdominal, grip and arm and shoulder girdle strength in girls, ranging in age from 12 to 15. Ss divided into control and exp. groups. Each group was given the identical pre and posttests. The exp. group was also involved in a 30 wk jogging program, jogging 4-5 times/wk and earning a minimum of 24 points by jogging designated distances in the prescribed amount of time. ANCOVA was used on collected data. Conclusion: exp. group experienced significant increases in abdominal, back and leg strength and grip strength of the dominant hand and endurance. No significant increase occurred in grip strength of non-dominant hand or arm and shoulder girdle strength.

557. LA FORGE, Ralph L. Effects of an eight week progressive distance running program on isolated electrocardiographic and vectorcardiographic parameters in untrained college males. M.S. in Physical Education, 1975. 90 p. (P. Wilson)
To determine specific electrocardiographic and vectorcardiographic effects of an 8 wk progressive distance running program, 26 untrained college males were recorded while at rest and in supine position. The training group (N=26) trained 55 min/day, 3 days/wk, for 8 wks. Running intensity was set between 75% and 80% of the individual's max predicted HR and running distances were increased weekly. Remaining 10 Ss were selected to serve as the control group. Electro and vectorcardiographic data were treated by ANCOVA with t-tests employed in analyzing Balke Treadmill Test results. Significant pre and post training differences indicated a decrease in resting HR, an increase in Q-T interval in Lead II and V4, an increase in QRS and T wave ht in Lead V4, increase in max QRS and T vector magnitude in frontal plane, increase in treadmill performance time. Progressive distance running for 8 wk of 3 days/wk at 75% to 80% of max HR induced significant increases in depolarization and repolarization electromotive forces in the heart.

558. LATTIMER, Jean. The effects of a season of competitive interscholastic basketball in selected physiological responses in high school girls. M.S. in Physical Education, 1975. 38 p. (W. Kaufman)

A group of HS female varsity basketball players were chosen for selected physiological tests to determine whether changes had taken place during the season and to compare responses. Vertical jump, RT of dominant hand and foot and non-dominant hand and foot, resting HR , distance covered in Cooper's 12-min run, HR immediately after the 12-min run and recovery rates at 1, 2, and 4 min intervals following 12-min run were measured using 21 members of the 1974-75 New London SHS girls' basketball team. A correlated t-test was used to test for significant differences between $\bar{X}$ scores of the pre and posttest. Responses did change significantly ($p < .05$) following tests: Resting HR, distance covered in 12-min run, recovery HR at 1, 2 and 4 min following 12-min run. No significant change in vertical jump, RT for dominant hand, non-dominant hand, dominant foot, non-dominant foot and HR immediately after the 12-min run.

559. SEMON, Karen. The effects of a combined jogging-weight training program on cardiovascular fitness, strength, girth and body composition in college women. M.S. in Physical Education, 1975. 81 p. (W. Floyd)

To determine effects of combined jogging-wt training program for women on cardiovascular fitness, strength, selected skinfold thicknesses, selected girth measurements and body composition, 64 females were chosen from 2 nutrition and fitness classes at UW-La Crosse. Ss were randomly divided into 2 separate groups for pre and posttesting procedures. All jogged 3 days/wk and wt trained on alternate 2 days for 8 wks. The pretest group was given a battery of strength, cardiovascular and anthropometric tests before the training period began. The posttest group was given identical tests at the conclusion of the training period. The design used was the separate-sample pretest, posttest design, and the statistical model used to analyze collected data was a t-test for samples of equal variance. The posttest group experienced significant ($p < .05$) increases in cardiovascular fitness, biceps curl, bench press and abdominal strength and decreases in 3 of 5 skinfold thicknesses and % body fat. The posttest group did not experience significant changes in skinfold thicknesses, girth measurement or quadriceps strength.

560. TROKAN, Patrick A. A comparison of two pick-off moves to second base by a right-handed pitcher in baseball. M.S. in Physical Education, 1975. 49 p. (W. Kaufman)
Ss were randomly selected and placed in 2 groups of 25 each in order to compare 2 pick-off moves to 2nd base by a right-handed pitcher in baseball. Pick-off moves are described as the 180° "whirl turn" and the "back door" methods. Each group spent 3 days of instruction and practice in perfecting 1 of the pick-off methods. Testing started after each group had completed the instruction period. Each S was given 4 recorded attempts to determine speed and accuracy of a pick-off method. After a 2 day rest period, the procedure was repeated; however, each group was instructed and tested in the opposite method that they initially employed. A light-activated photocell timer with .01 readings was used to time the speed of the Ss. A canvas target, placed at 2nd base, was used to determine the accuracy of the throws. Statistical significance was obtained in the difference between the "back door" and the "whirl turn" methods in both speed of the method and accuracy of the throws.

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561. ANDERSEN, Donald R. Branch Rickey and the St. Louis Cardinal Farm System: The growth of an idea. Ph.D. in Physical Education, 1975. 295 p. (M. Remley)
Professional athletics, as practiced in the United States, are both reflections of and contributors toward the American cultural milieu. Of all the professional sports, baseball has been cited as providing the best example of the metamorphosis of a typical American sport. One of the causal factors in the growth and development of American professional baseball was the establishment of a viable farm system. This involved a practice of major league ball clubs scouting and signing promising young players and assigning them to minor league teams that were either owned by or affiliated with the parent major league organization. In this fashion, the skills of these young players were nurtured and developed until they were ready for advancement to a higher level of competition. The St. Louis Cardinals, under the direction of Cardinal Vice President Branch Rickey, were credited with establishing the first workable farm operation. This study investigated the farm system idea and the man who was instrumental in its fulfillment. A description of the original growth and evolution of the Cardinal Farm System was provided along with the factors which contributed to its operation. The concept of a Major League Baseball Club developing its own players was, of course, sound. Consonant with this idea, however, there was a

need for a dynamic implementer and a set of circumstances which assured success.

562. BURTON, Damon D. Specificity of pain responsitivity, personality and endurance performance. M.S. in Physical Education, 1975. 122 p. (W. Morgan)

This investigation evaluated the ability of pain responsivity to predict endurance performance. Male volunteers (N=29) were given treadmill and pain tests on 2 consecutive days. Max aerobic power (MAP) was first determined for each S who then performed an endurance run the following day at 80% of MAP. Pain was produced with a Forgione-Barber digital pressure stimulator according to a randomly selected schedule of force and vision conditions. Ss received alternate combinations of these treatments (constant vs pulsed and shielded vs non-shielded) on consecutive days. Actual pain tolerance values were not achieved on all Ss because of the necessity of response truncation in order to prevent tissue damage. This invalidated the use of pain tolerance in a multivariate prediction model. Stepwise multiple regression analyses revealed that the threshold and psychophysical rating values utilized were not significantly related to endurance performance. Proportional analysis demonstrated that a pulsed pain stimulus elicited more tolerance responses than the more commonly used constant condition, although visual shielding conditions were not significantly different when compared on the basis of pain tolerance. It is concluded that pain responsivity as operationalized in this study is not correlated with endurance performance. A pulsed pain stimulus is significantly more effective in achieving tolerance responses than a constant condition, but shielding has no effect on pain responsivity. Attitude toward physical activity is the best single psychometric predictor of endurance time.

563. EASTGATE, Carole A. Attitudinal differences between female participants and non-participants in a middle school extramural meet. M.S. in Physical Education, 1975. 175 p. (M. Safrit)

This study determined the extent to which 7th and 8th grade girl participants (N=214) and non-participants (N=249) in the Madison Middle School Girls' Track and Field Meet differed in attitudes toward physical activity, track and field and extramural meets and to what extent these attitudes were "activity specific" as opposed to being related to physical activity in general. The Children's Attitude Toward Physical Activity Inventory (CATPA), and the Specific Activity Inventory (SAI), were used to measure the Ss attitudes. The CATPA resembles the Attitude Toward Physical Activity Inventory by Kenyon. Ratings

of the dimensions within both the CATPA and the SAI instruments, Xs and SDs for each dimension on both instruments, correlation of the D matrices, rankings of the 6 dimensions in the CATPA, X^2 and post hoc analyses using the Scheffé test indicated that: participants and non-participants differed significantly in the distribution of ratings across a priori categories, both participants and non-participants ranked the 6 dimensions in the CATPA nearly identically, and participants had most positive feelings about the track and field meet but also enjoyed other activities while non-participants did not like track and field and felt unskilled in the activity while expressing enjoyment in physical acvitivy per se.

564. FRANCHER, Terry. A history of racquetball. M.S. in Physical Education, 1975, 95 p. (M. Remley)
Racquetball is one of the fastest growing sports in the U.S. today, and its introduction into the PE curriculum has done much to create interest in the game. Racquetball is probably the easiest of all racquet games to learn and may be played by people of all ages and both sexes. Factors explored in the history of the game included a brief history of paddleball, the forerunner to racquetall, origins of racquetball, organization and leadership, opposition by handball players, game changes involving rules and equipment, women in racquetball, and financial aspects of the game. The primary emphasis of the paper was on the main events of the sport between 1968-74. Information for the study was gathered through tape-recorded interviews with past national officers, personal files, the archives of the U.S. Handball Association, which published news of racquetball in the late 1960s, and from the Internatioanl Racquetball Association. Being the product of hundreds of yrs of evolution of other racquet sports, racquetball has made remarkable achievements in a short time.

565. DISHMAN, Rod K. A comparison of opinion among physical educators to selected purposes of human movement. M.S. in Physical Education, 1975. 83 p. (A. Jewett & J. Wolf)
In a study partially funded by the AAHPER, 200 male and 200 female PE teachers were randomly selected from the memberships of the NCPEAM and NAPCECW. Ss were requested by mail to respond to a questionnaire derived from purposes of human movement as defined by the Purpose-Process Curriculum Framework. Results from a 57% return indicated that college and university PE teachers, as represented by members of NCPEAM and NAPECW, in large part supported the PPCF's organization of 22 purposes of human movement under 7 Major Concept categories. There were no significant differences ($p < .01$) between males and females in the rating of the Major Concept categories as to importance for a college or university PE general program.

566. GOWITZKE, Barbara A. Dynamic properties of rapid limb movement as a function of spatial and temporal variables. Ph.D. in Physical Education, 1975. 392 p. (W. Roberts)

Ss were attached to an instrument which was used to quantify time, displacement, velocity, acceleration, and (inferentially) impulse. The upper extremity moved in a single vertical plane, and swings with and without backswing were investigated. For the former, range (90^{o}, 45^{o}, 0^{o} and choice) and speed (fast, slow, choice of backswing were varied in random combinations: swings with a backswing were compared to unidirectional swings. The Ss goal was to achieve max velocity on the forward swing. The dependent variables chosen were derived from a total of 336 events. No main effects attributed to backswing range were demonstrated for max acceleration and max velocity of the forward swing, time span between the 2 and the positive area under the acceleration and the positive area (impulse). The data were also normalized to facilitate comparisons across variables among Ss. The normalized method showed that patterns of motion were different both inter- and intra-individually.

567. GRUEN, Naomi. The choreography of Martha Graham. M.A. in Dance, 1975. 116 p. (M. Fee)

This study established a perspective by which one might interpret the choreography of Martha Graham. Her dance dramas have as their nuclear motivation the search for meaning which begins in the psychic landscape. These psychic energies are translated into various forms. The structure of the choreography integrates these memory fragments into a greater unity than that readily apprehensible in actual life experience. These dance symbols provide a concrete structure whereby the viewer may conceive the meaning of experience. As such, Graham builds an ethical framework for the psychic energies that these enlivened memories release in the viewer. Validation for these conclusions has been drawn from several sources—from the implications of the trends of Graham's stylistic development, from the psychological nature of her narratives, and from the relative emotional authenticity of her movement idiom. The structural logic of Graham's forms also seems to support these interpretive conclusions. These artistic motives evince themselves in several aspects of form—in costumes, light, motion, decor, narrative, and sound. A final attempt has been made in light of these conclusions to discuss the meaning of structure in Appalachian Spring.

568. HANSON, J. Bradley. A kinematic analysis of the support phase of sprint running in selected individuals. M.S. in Physical Education, 1975. 103 p. (E. Roberts & L. Halverson)

The support phase in running of 2 8th grade males, 1 a fast runner and the other an average runner were filmed in a timed 50-yd dash (300 fps). A descriptive comparison was made of the support and corresponding recovery phase for the ankle and metatarsal-phalangeal joints with the primary purpose being to identify differences that exist between an untrained faster runner and an untrained slower runner. Findings were: ground contact time was shorter for the faster runner (118.8 msec) than for the slower runner (135.3 msec); the faster runner had a longer % of flight and a longer total stride length; the ankle joint of the slower runner was more flexed just prior to and during foot strike resulting in a more flat footed landing; for the faster runner, support ankle joint measures were greater in range of movement, degree of extension at lift off, and % of support during joint extension than for the slower runner; for the faster runner, the % of time of M-P elevation, within the period of takeoff, was greater than for the slower buttocks during the forward swing period for the slower runner.

569. HARPER, Christine J. Movement responses of kindergarten children to a change of direction task—an analysis of selected measures. M.S. in Physical Education, 1975. 70 p. (L. Halverson).

Ten girls and 10 boys (5-yr-old) were filmed as they performed a movement task demanding a reversal in direction. Three trials of each S were studied to derive $\bar{X}$ values representing the component parts of the task—the run, deceleration, and facing change. Variables included running, velocity, RT, reversal time, deceleration time, facing change time, number of steps needed to complete the facing change, and max change in trunk inclination prior to initiation of the facing change. The contribution of each component to the whole was examined by describing, relating, and comparing these variables within and across groups within the sample. Some of the results were: there was no difference between girls and boys in either running velocity or reversal time; the children with the fastest reversal times both decelerated and changed facing faster than the children with the slowest reversal times; no child needed fewer than 4 nor more than 8 steps to complete the facing change; 88% of the 60 reversals were completed with from 4-6 steps; and the sample $\bar{X}$ running velocity was 12.98 ft/sec.

570. JOHNSON, Joan M. Design for utilizing gesture in dance. M.A. in Dance, 1975. 113 p. (M. Fee)
This study examined the instrument of the dancer in terms of joint action, and it revealed a process for abstracting movement motifs from gesture and certain spatial aspects of bodily movement content. Primary motifs were abstracted from gesture by analyzing joing actions, and secondary motifs were derived by applying certain compositional techniques to the primary motifs. The results of the study were: a movement analysis of certain spatial attributes of one gesture resulted in the identification of 8 motifs; each motif contained a specific sequence of joint actions; and changes in the range of movement and in the action type producing the gesture changed the resultant spatial design.

571. KELSO, J. A. Scott. Planning, efferent and receptor components in movement coding. Ph.D. in Physical Education, 1975. 216 p. (G. Stelmach)
Three exp. employing a reproduction paradigm were conducted to examine the relative role of effector and receptor processes in voluntary, preselected movements. Exp. 1 concerned the cognitive contribution of a movement plan and its relationship to efferent command information in explaining the superiority of preselected movement. Ss performed under conditions which differed with regard to efferent information (active vs passive) and the availability of a movement plan (preselected, S defined vs constrained, experimenter defined). Active preselection had significantly smaller reproduction errors than any other combination, indicating that the planning process was insufficient in itself to facilitate retention. Exp. 2 and 3 examined the contribution of proprioceptive input to a memory representation of preselected movement. Joint and cutaneous information in the hand was rendered insentient using a nerve block applied to the wrist. Reproduction errors for Exp. 2 revealed no significant differences between normal and block conditions, suggesting that where prior information is available about the movement, Ss are less dependent on peripheral input for reproduction purposes. Exp. 3 involved comparisons between reproduction of end location and distance of preselected movements under normal and block conditions. While distance and location reproduction errors were not significantly different for normal movements, location reproduction was superior to distance under block conditions suggesting that reproduction performance was dependent on a central representation of location rather than the selective utility of efferent commands for movement extent. The findings were interpreted in light of recent motor behavior theories and neurophysiological data.

572. ROBERTON, Mary Ann. Stability of stage categorizations across trials: Implications for the "stage theory" of overarm throw development. Ph.D. in Physical Education, 1975. 121 p. (L. Halverson)

This study examined intra-task motor stage stability to test motor development stage theory. Ten filmed, 2-view trials of the forceful overarm throw were independently categorized for each of 73 grade 1 children using a hypothesized, developmental classification for movements of the pelvis, spine, and arm. The independent classifications were examined across each child's 10 trials. The children showed reasonable arm-trunk stage stability and variation only across adjacent arm-trunk stages. Their modal stage averaged 8.967 trials. Some variation across non-adjacent pelvic-spinal stages was observed. A X^2 Test of Homogeneity indicated a significantly greater chance ($p < .05$) by 12-55% for primitive throwers to be relatively stage-consistent rather than stage-variable and an 11-70% greater chance for intermediate throwers to be stage-variable rather than con-consistent. Advanced throwers were equally-likely to be either, although the 2 most advanced were stage-consistent. The data partially validated the developmental classification. They also supported the theory that increased movement options or degrees of freedom accompany advancement in motor development. A new view of intra-task motor development was proposed to provide flexibility to stage theory, which appeared to be a viable research paradigm.

573. RUSSELL, Kathryn R. The influence of movement intent on short term motor memory. Ph.D. in qhysical Education, 1975. 202 p. (M. Sloan)

This study investigated the influence of movement intent, amplitude and direction on the accuracy (constant error) and consistency (variable error) with which displacement and time components of a semi-continuous motor task could be recalled. Ss (N=36) experienced an imposed, standard shoulder joint movement under 1 of 3 movement intents: passive, attempted opposition or attempted speeding. EMG were used to validate Ss' intent. Ss were also tested under active-choice conditions. Recall accuracy and consistency for displacement components were not differentially influenced by the intents under the imposed movement conditions. Time reproduction revealed a significant condition effect; the oppose group slowed the test trials while the passive and speed groups moved faster. These results were discussed on the basis of differential sensitivity of joint receptors to articular tension. As amplitude increased, the accuracy and consistency of tiem and consistency of displacement recall, tended to decrease. Flexion movements were overestimated, hyperextension were underestimated. Recall accuracy for

hyperextension was superior to flexion. Active selection and execution of the standard movement facilitated recall of displacement components but not accuracy of time replication. Results were discussed in terms of possible additional sources of information available when volitional movement matched the movement experienced.

574. SHRADER, Ray Anne. Movement process feedback and movement product feedback in the teaching-learning of an open and closed skill. Ph.D. in Physical Education, 1975. 257 p. (F. Cumbee and A. Jewett)

The purposes were to determine the interactive effects on final performance and learning rate of selected skill-feedback combinations and to test a proposed skill learning model. College women (N=60) were assigned to 1 of 6 exp. groups which represented combinations of open and closed skills and no., product and process feedback conditions. Both skills involved hitting 200 tennis balls over a barrier onto a floor target obscured from view. For the closed skill, balls were suspended on a string; for the open skill, balls were launched from 1 of 2 inclined tracks. Respective augmented feedback was given immediately after each trial. A 2 X 3 X 20 ANOVA for factorial designs with repeated measures was performed, planned comparisons were tested for amount and rate differences, and the Newman-Keuls sequential range test located significant differences. Significant findings indicated amount and rate of learning was a function of the unique combination of skill and feedback; the closed skill was better; product feedback was better than the other 2 types; Ss in the open skill-no augmented feedback group were better than their closed skill counterparts. Some motor, sensory-perceptual, and cognitive functions proposed in the model were exhibited.

575. SNOWDEN, Marion L. Acceleration accuracy: An evaluation of cinematographical techniques in biomechanics. M.S. in Physical Education, 1975. 72 p. (E. Roberts)

The purpose of the study was to define the accuracy and evaluate the analytical techniques used to calculate acceleration due to gravity from 16 mm film position data. At 64 and 100 fps, 16 mm film of an indoor shot (a rigid body, single datum point) was taken. The position data were curve fitted by a cubic spline function curve fitting technique with 2 parameters, sigma (degree of smoothing) and the wts assigned to the data points being varied. The 100 fps film produced the best data. Using 1 reference point, 50 frames, 2nd spline wts, and sigma = .008, the X accelration data contained 1.80% error, the Y accelration data contained 3.50% error. A sigma of .01 resulted in 0% error for the X acceleration data. The human body in flight was filmed at 100 fps; the center of gravity was

calculated. From the X acceleration data, 2.84% error was obtained using 2 reference points, 35 frames, 2 spline wts, and sigma = .025. The Y acceleration data contained 9.94% error using 1 reference point, 50 frames, 2nd spline wts, and sigma = .01. As a rough estimate, the appropriate sigma value is between the resolution of the digitizer, or the value obtained from a reliability test, and 80% of this value.

576. WEBER, Marie L. The role of the woman high school physical education teacher as viewed by selected university and public school personnel in Wisconsin. Ph.D. in Physical Education, 1974. 276 p. (L. Halverson)

The specific goals of the study were to identify the expectations which were held for the position occupant by fr. and sr. women PE major students, university PE faculty, HS principals, HS non-PE teachers, and women HS PE teachers, to describe the similarities and differences in views among groups, and to identify the subroles contained within the total role of the woman HS PE teacher. Ss, representing 6 different Wis. subgroups (N=1,126) were selected as participants. Ss were asked to respond by mail to a Teacher Competency Questionnaire which was designed to elicit the degree of importance which they attached to various teaching competencies which a woman HS PE teacher might be expected to possess. Responses were received from 791 Ss, a return of 70%. Data were analyzed using factor analytic techniques. Five conclusions were drawn.

WEST CHESTER STATE COLLEGE (E. NORRIS)
WEST CHESTER, PENNSYLVANIA

577. WHITMORE, Eric E. Cinamatographic analysis of the handspring front salto vault. M.S. in Physical Education, 1975. 53 p. (J. Lowe)

Intercollegiate varsity gymnasts (N=15) from 10 institutions performed 45 front handspring salto vaults. All vaults were filmed at 64 fps by 2 simultaneously operating cameras focused at right angles to each other. Each vault was scored by a certified gymanstics judge. Only those vaults scored at "9" or better were evaluated. Intercorrelations were calcualted between the judges' socres, angles of board contact, take-off, horse contact and repulsion from the horse, and velocities at board contact, take-off, horse contact and repulsion from the horse. It was concluded that the lower the angle of repulsion from the horse the higher the buttocks rose and the higher the buttocks rose, the higher the score. No specific angle and/or velocity produced the best vault.

WEST VIRGINIA UNIVERSITY (ANDREW C. OSTROW)
MORGANTOWN, WEST VIRGINIA

578. CRAIN, Edwin W. Some characteristics of preservice elementary teachers prepared in a competency based physical education program compared to a group prepared in a conventional program at Pembroke State University. Ed.D. in Physical Education, 1973. 254 p. (W. Douglas)

579. DAVID, Mary S. Effects of peer cooperation on learning a selected gross-motor whole-body task by 17-22 year old women. Ed.D. in Physical Education, 1974. 111 p. (R. Kurucz)

580. DIFEBO, James D. Modification of locus of control in a sport setting. Ed.D. in Physical Education, 1974. 183 p. (R. Kurucz)

581. ELMORE, Sandra J. Development of the tennis personality inventory. M.S. in Physical Education, 1975. 101 p. (A. Ostrow)

582. GALLUCCI, Samuel. The effect of collective bargaining on the governance role of the physical education department chairperson. Ed.D. in Physical Education, 1975. 178 p. (W. Douglas)

583. GRACE, Paul C. Assessment of biomechanical factors related to ankle sprains in men's intramural basketball at West Virginia University. M.S. in Physical Education, 1974. 56 p. (R. Kurucz)

584. HOLTZWORTH, Jonathan S. A content analysis of sociocultural trends in sport and society. M.S. in Physical Education, 1975. 56 p. (W. Alsop)

585. LAWRENCE, Judy A. An exploratory analysis of the normative structure of the sport spectator. M.S. in Physical Education, 1973. 33 p. (W. Alsop)

586. LUDWIG, Ronald L. Personality characteristics of champion gymnasts. M.S. in Physical Education, 1975. 70 p. (W. Alsop)

587. MOORE, Robert E. The collection, analysis, and comparison of human sensible perspiration between sedentary and conditioned male caucasians as to the variation in selected electrolyte composition. Ed.D. in Physical Education, 1975. 132 p. (R. Kurucz)

588. MYERS, Lawrence G. An analysis of the comparative effect of downhill versus level training circuits on the running speed of college soccer players. Ed.D. in Physical Education, 1974. 104 p. (R. Kurucz)

589. NEUMANN, Stanton H. An analysis of selected relationships between sport skill and the modification of a social attitude. Ed.D. in Physical Education, 1973. 218 p. (W. Alsop)

590. NOLAN, Dianne. Aggressive characteristics of female basketball players and swimmers. M.S. in Physical Education, 1974. 58 p. (A. Ostrow)

591. PIERCE, William J. A study of the effect of success on attitude modification. M.S. in Physical Education, 1973. 73 p. (W. Alsop)

592. TRUCE, Gary L. The effects of suggestibility on response time performance of college students. Ed.D. in Physical Education, 1974. 134 p. (R. Kurucz)

593. VAUGHN, William R. The effect of positive reinforcement, punishment, and positive reinforcement-punishment on the acquisition of a motor skill. Ed.D. in Physical Education, 1975. 92 p. (R. Kurucz)

594. WIEST, Anne. Legislation effecting womens' involvement in athletics in tax supported colleges and universities. M.S. in Physical Education, 1974. 59 p. (W. Douglas)

595. YEATER, Rachel A. The effects of prolonged submaximal exercise on the release of the lysosomal enzymes acid phosphatase and b-glucuronidase in rat skeletal muscle. Ph.D. in Physical Education, 1975. 42 p. (R. Kurucz)

WESTERN ILLINOIS UNIVERSITY (G. W. HERMANN)
MACOMB, ILLINOIS

596. ADAMS, Edward E. A study of lifetime leisure activities taught in the public and private high schools in Chicago and the Chicago area suburban high schools. M.S. in Physical Education, 1975. 46 p. (J. Colgate)

A survey instrument was sent to the boys' PE director in each of 52 Chicago public HSs, 23 private HSs and 50 Chicago area suburban HSs to determine what leisure activities were taught and if there was a difference in the amount of time spent on leisure activities. Jogging, swimming, and wt. training comprised 85% of the leisure class hrs taught in the public HSs, compared to 48% in the private HSs and 39% in the suburban HSs. In the public HSs jogging, swimming and wt. training averaged more

than 10 hrs/school yr; in the private HSs golf, handball, swimming and wt. training averaged more than 10 class hrs/school yr; in the suburban HSs archery, badminton, golf, swimming, table tennis, tennis and wt. training were offered more than 10 class hrs/school yr. In the public, private and suburban HSs, the 2 reasons noted most frequently for not offering leisure activities included lack of facilities and equipment with lack of funds cited as the 3rd reason in public and private HSs. In suburban HSs funding was not a major reason for not offering leisure activities.

597. BOKEMEIER, Dennis R. Analysis of Mac military and dependent recreation interest and participation. M.S. in Park and Recreation Administration, 1975. 131 p. (J. Harris)

A questionnaire dealing with the usage and time utilization of REC facilties was personally gathered on 5 bases of the Military Airlift Command. Ss (N=936) included only military personnel and dependent wives. The data show that a problem exists on each base in regard to officer wives' utilization of facilities. Very few wives participated in activities or special classes provided. The need exists to reorganize and improve instructional and educational classes offered. New programs and classes with current interest may need to be offered. Overall, the usage of facilities and activities was very good. Several facilities showed a tremendous amount of utilization with large participation rates during the early evening hrs. There were 8 specific facilities which received a great deal of usage in support of family leisure activities. Individual recommendations are provided for each base to support possible solutions to their own specific problems.

598. BOYER, Raymond K. Utilization of research and reading materials by chief executives of park districts and municipal park and recreation agencies in the state of Illinois. M.S. in Recreation and Park Administration, 1975. 75 p. (F. D. Lypton)

A questionnaire survey was used to determine the utilization of research and reading materials by chief executives (N=111) of park districts and municipal park and REC agencies in the State of Ill. The study was broken down into 5 specific areas relative to utilization of research and reading materials: time set aside for; categories and kinds; attitude of chief executive; specific uses; and why certain categories and kinds were not utilized. Data obtained from questionnaire responses were treated by item frequency checks and the determination of rank. Total frequenceies were converted to %s. Based on the findings, 5 conclusions were given dealing with the utilization of

research and reading materials by chief executives. In addition 7 recommendations were provided as guidelines to make these endeavors more beneficial and meaningful.

599. CAMPBELL, Stan R. The effects of win-loss record and ticket price on season ticket sales and average home attendance for college football 1970-74. M.S. in Physical Education, 1975. 124 p. (J. Colgate)

A questionnaire was sent to 126 athletic business managers to determine the effects of the following information at NCAA Division I institutions in the sport of football for 1970-74; the previous season's win-loss record on season ticket sales and average home attendance; and increased reserved single game ticket price on season ticket sales and average home attendance. It was concluded that a winning record the previous year had a positive effect on the following year's season ticket sales; although an institution had a winning record the previous year, the following year there was a decrease in average home attendance; a losing record the previous year had a negative effect on the following year's season ticket sales; although an institution had a losing record the previous year, the following year there was an increase in average home attendance; an increase in the reserved single game ticket price had a negative effect on season ticket sales; however, no change in the reserved single game ticket price had a positive effect on season ticket sales; whether the reserved single game ticket price increased or remained the same made no difference in average home attendance, as it decreased in both instances.

600. FABIK, Rudolph A. The recreational patterns and habits of fifty male juvenile delinquents one year prior to their placement in an Illinois youth center in Hanna City. M.S. in Park and Recreation Administration, 1975. 68 p. (R. Bunch)

A 9-item interview questionnaire and personal files were used to determine the recreational leisure time experiences of 50 male juvenile delinquents 1 yr prior to their placement on an Illinois Youth Center. Football, basketball and baseball were the most popular sports activities fo the students but ice hockey, racing cars and tennis were the sports activities they would most like to participate in. Swimming, fishing and camping were the most popular outdoor-nature activities while hunting, camping and snow-skiing were the activities they would most like to participate in. The most popular cultural events and activities included attending rock concerts, visiting museums, and doing woodcraft while woodcraft while woodcraft and designing clothes were the 2 most frequently mentioned cultural activities which the youth would like to participate in. Social activities were divided into 2 categories: social activities

and acts of delinquency. Spending time with girlfriends, attending movies, going to parties and riding in cars were the most popular social activities while traveling and working on cars were named as those they would most like to participate in. Smoking marijuana, drinking alcoholic beverages and gambling were named most frequently as acts of delinquency.

601. FORD, Robert L. An analysis of the diamond offense. M.S. in Physical Education, 1975. 81 p. (W. Shanahan)
Coaches' opinions, game performance, sequential photographs and a computerized game were used to analyze the diamond offense against the 52 defense. The study was limited to an analysis of 5 running plays and a restricted passing game. The findings revealed that 78% of the coaches agreed that the diamond offense was basic in its offensive theories; the offense averaged 4.2 yds per carry in actual game performance; the blocking technique and the backfield's movement were shown in the sequential photographs; and the computer programs gave indication that science can be used in football.

602. GILLILAND, Rick E. The relationship between running speed and a measure of social status in second and sixth grade boys and girls. M.S. in Physical Education, 1975. 33 p. (K. Pearson and B. Yeager)
Boys and girls in grades 2 (N=74) and 6 (N=51 were used to determine the relationship of speed as indicated by time for the 50 yd dash to social status based on scores on a questionnare devised by the researcher. Pearson r was used to show the relationships between: Boys' status ratings of boys and the running speeds of boys, girls' status ratings of girls and the running speeds of girls, girls' status ratings of boys and the running speeds of boys and boys' status ratings of girls and the running speeds of girls. It was concluded that: 2nd grade boys who were faster runners were regarded with higher status than were boys who were not as fast; peer status of 2nd grade girls was not significantly related to running speeds of those girls ($p > .05$); social status ratings of 6th grade boys appeared not to be significantly affected by their running speeds; 6th grade boys choose their female friends on bases other than running speeds of females. However, running speed did appear to have a significant relationship ($p < .05$) to the status of 6th grade girls as rated by other 6th grade girls and the 6th grade as a whole.

603. HATTIG, Sally. The attitudes of four-year college faculty women toward certain questionable practices in women's athletics. M.S. in Physical Education, 1975. 44 p. (K. M. Pearson)

Ss were 132 full-time female PE teachers and coaches from 4 yr public colleges and universities in Ill. A survey instrument consisted of 47 situation-response statements to which the Ss were asked to respond by checking 1 of 5 responses ranging from "Strongly Approve" to "Strongly Disapprove". Attitudes were sought concerning questionable practices in 3 categories: team sports situations; individual sports situations; and general sports situations. Each response was weighted and 5 comparisons were made using the $\bar{X}$ response for each group. Although Ss reacted to questionable practices in athletics by showing disapproval in all 3 categories, the strongest disapproval was recorded in relation to practices in individual sports. Team sports situations followed with the general sports situations receiving the least strong reaction of disapproval. The $\bar{X}$ responses of all groups leaned more heavily toward disapproval than toward approval concerning questionable practices in women's athletics.

604. JONES, Dianne C. Critical requirements for coaching women's intercollegiate volleyball in the state of Illinois. M.S. in Physical Education, 1975. 77 p. (B. Yeager)

The Critical Incident Technique was used to collect, identify and classify incidents judged to be characteristic of effective and ineffective behavior relative to coaching women's intercollegiate volleyball players who were members of 13 teams participating in the 1974 Ill. State Volleyball Tournament. The 684 incidents reported yielded 1,324 behaviors which were placed in a classification system comprised of major areas, sub-areas, classes and categories. A list of the 17 most frequently reported behaviors represented the most critical behaviors. The study attempted to define competencies through the use of a job analysis technique, rather than through intuition or "expert" opinion. This technique requires observers to record "observable behavior" which is thought to make an effective contribution of the aim of the activity being investigated.

605. KANDYBOWICZ, Stephen J. An exploratory study of the utilization of citizen advisory councils by public park and recreation agencies in the state of Illinois. M.S. in Park and Recreation Administration, 1975. 99 p. (R. Bunch)

An initial 1-question rank order listing was sent to 30 Gold Medal Finalist Award agency administrators to assist in establishment of criteria for citizen council "effectiveness." This

was followed by a questionnaire survey sent to 193 public park and REC agency administrators. The data clearly indicated that less than half of the public agencies in the state were utilizing citizen advisory councils and those that were did not occur more frequently in the larger communities. Also indicated was a great deal of variability in factors of citizen advisory council organizational patterns, responsibilities, purpose and general effectiveness in accomplishing objectives. There was evidence of simultaneous agreement and disagreement by the study participants and the panel of judges as to the areas and degree of citizen advisory council effectiveness. Overall, the attitude of the administrators toward the existence of citizen advisory councils was favorable. Despite the many problems in working with the councils, the administrators continued to strongly support their utilization as an instrumental force in facilitating park and REC services to the community. Recommendations are provided as guidelines to suggest methods of effective citizen advisory council utilization by the public agencies.

606. MANKINS, Fred W. The relationships between win-loss record and the number of junior college or freshman players on basketball teams during the 1973-74 season. M.S. in Physical Education, 1975. 43 p. (J. Colgate)

A survey instrument was used to investigate the relationships between 1st yr jr. college (JC) players, 2nd yr JC players, fr. players and soph. players who were recruited as fr. in regard to the win-loss record of basketball teams in the 3 divisions of the NCAA. Ss were 227 college basketball teams in the U.S. during the 1973-74 season. The findings appear to warrant the following conclusions: there was a positive r between the no. of 1st yr JC players and their team's winning %; 2nd yr JC players and their team's winning %; fr. players and their teams winning %, and soph. players who were recruited as fr. and their team's winning % in all divisions of the NCAA. The fr. players had a higher relationship to win-loss record than the 1st yr JC players and the soph. players who were recruited as fr. had a higher relationship to the win-loss record than the 2nd yr JC players in all divisions of the NCAA.

607. MCGRATH, Julie K. The development of an aerobic cardiovascular test for the female athlete. M.S. in Physical Education, 1975. 39 p. (R. Aten and E. Chapman)

Ss were 43 varsity female athletes who were tested and retested with 1 intervening day to establish reliability for a running test for $M\dot{V}O_2$. Following a warm-up period on the treadmill and a 5 min rest, the S started with a 3% incline and 6 mph run. The treadmill was increased in gradation 2% every 2 min until exhaustion. The volume of air displaced, the temperature of

expired air, HR and $\dot{V}O_2$ were recorded for every min of performance and 3 min of recovery. Average $M\dot{V}O_2$ was 2.7577 l/min on the 1st test and 2.877 l/min on the 2nd. Expressed in terms of body wt., these values were 44.786 ml/kg and 47.2016 ml/kg. The Pearson *rs* for the repeated test were .7074 (lt./min) and .7595 (ml/kg) ($p < .01$). Treadmill run time ranged from 2-12 min and appeared to be a very desirable protocol for this female athlete population.

608. OLSON, Larry J. A study to determine if hitting in baseball can be improved through use of motion pictures. M.S. in Physical Education, 1974. 32 p. (W. Bradley)

Male undergraduates (N=40) were divided into 4 groups to determine if a batter's ability to hit a pitched baseball in hitting practice can be improved by identifying various types of pitches through use of motion picutres. Scoring of data was accomplished through use of a solid hit sheet listing no swings, missed swings, foul tips and solid hits. Exp. groups were involved in 2 training sessions for 6 wk. Group I saw a varied sequence of 25 pitches through the use of motion pictures. Each S was asked to identify after each pitch whether it was a curve or fastball and/or a ball or strike. Group II attempted to hit 25 straight pitches from the pitching machine at each training session. Group III utilized the film training program as described for Group I and the hitting session as described for Group II. The *t*-test for correlated Xs was used to determine the significance of the improvement from pre to posttests. ANCOVA was used to compare the treatment effects of hitting training, film training, and the interaction of hitting and film training. A hitting training program is effective to increase the no. of solid hits in baseball batting; and a hitting and film training program combined is apparently no more effective than a hitting program only.

609. PASCUZZI, Deborah. The effects of anxiety on gross motor performance: A test of the inverted-U hypothesis. M.S. in Physical Education, 1975. 44 p. (R. Aten and E. Docherty)

The trait anxiety (TA) scale of the State-Trait Anxiety Inventory was administered to 61 female college students to test the inverted-U hypothesis. On the basis of anxiety scores, Ss were assigned to either a low or high TA group and randomly assigned to 1 of 3 exp. treatments. Creation of 3 levels of anxiety (low, medium, high) constituted the 3 treatments. The stabilometer was the task used to measure performance. A 2-way ANOVA used to detect significant differences among performance of the groups resulted in an insignificant *F* ($p > .05$). The *F* obtained in analysis of TA and the interaction of TA and state

anxiety (SA) on performance also failed to attain significance ($p > .05$). The 2-way ANOVA was again used to indicate differences among groups in respect to HR, palmar sweat and SA scores. None of these indices displayed differences considered effective in production of the desired intensities of anxiety.

610. SAINATO, Joseph C. Selected electrocardiographic and electrolyte changes as a result of an interval training program. M.S. in Physical Education, 1975. 38 p. (E. Chapman)

Ss were men between the ages of 25-64 who had not participated in an organized cardiovascular exercise program within the last 6 mo. A modified Balke treadmill test was used to determine the effect of a cardiovascular training program on the following factors: amplitude of the T-Wave in the V_5 precordial position, dispersion of the Q-T segment in the V_5 precordial position, and serum potassium levels as measured by the flame photometry method. Ss in the exp. group rode bicycle ergometers 3 days/wk for 7 wks. A dependent t-test and Pearson r were run on the data to test for reliability and covariants. A 1-way ANOVA was run between the gains of groups in each category that showed a significant t-test score. A significant difference was found betwee pre and posttest values of the Balke test of the exp. group during recovery ($p < .05$). A significant difference between the gains of the control and exp. groups indicated a training effect in the exp. group. While a significant difference was found between the pre and posttest scores of resting and recovery potassium values of the exp. group, there was no significant difference between the gains of the control and exp. group.

611. SCHEIVE, Robert J. The role of the high school assistant varsity basketball coach. M S. in Physical Education, 1975. 63 p. (L. Dittus)

Questionnaires were sent to assistant varsity basketball coaches at 100 randomly selected HSs to determine the role of the assistant varsity coach in Class AA HSs of Ill. The findings appear to warrant the following conclusions. The assistant varsity basketball coaches were not given full responsibility in many specific coaching duties for the varsity team. The range of responsibilities assumed was due to the philosophy of the head basketball coaches in how they perceived the role of the assistant coach and how they utilized their services. The approximate no. of hrs assistant coaches devoted to coaching basketball per wk depended on the amount of responsibility the head coaches delegated to them for varsity and non-varsity teams.

612. SCHULTZ, Diane K. A cinematographical analysis of an aerial forward walkover. M.S. in Physical Education, 1975. 66 p. (M. McKee)

Women Ss (N=3) were filmed performing the skill with a 16 mm camera at 64 fps to investigate movements of an aerial forward walkover from a stationary, standing position. Analysis of data utilized a Recordak to digitize single frames of the film to be used with a Hewlett Packard computer program. Tracings of selected film frames, graphs showing the path of the center of gravity and vertical and horizontal displacement of reference points were analyzed and discussed. The Ss exhibited 2 obvious similarities: the leg movements throughout the aerial walkover and the sequence of movements of all the body parts. These skill elements may need to be considered essentials to the successful execution of the aerial walkover. Differences observed were primarily concerned with arm movements and head position. The way in which a performer uses the arms and head may contribute to perfecting the skill.

613. SELBY, Martha J. A study of values—intercollegiate female basketball players. M.S. in Physical Education, 1975. 32 p. (K. Pearson)

The Allport Study of Values Test was used to discern any difference and/or similarities in values held by winning (N=22) and losing (N=14) female intercollegiate basketball players who were members of the top 3 and bottom 3 teams that emerged from the 1973-74 Ill. State Basketball Tournament. The differences in $\bar{X}$s between the 2 groups were tested through use of 1-way ANOVAs. Since no F met or exceeded significance, the hypothesis that winning and losing teams had similar value orientations was accepted.

614. WEIRTEL, Eloise A. The effect of positive and negative nonverbal/verbal cues on performance. M.S. in Physical Education, 1975. 56 p. (B. Yeager)

Ss (N=50) consisted of female students who were randomly assigned to 1 of 5 groups to examine effects of contradictory and nonverbal/verbal cues on performance. Group A, the control group, performed the task in the room with no tester present. All other groups were accompanied by a tester. Group B received positive verbal cues prior to performance of the task and negative nonverbal cues while performing. Group C received positive verbal cues prior to performance of the task and positive nonverbal cues while performing. Group D received negative cues and positive nonverbal cues thoughout the performance of the task. Group E received negative verbal cues followed by negative nonverbal cues while performing. Performance on a modified short service badminton task was

measured by the no. of successful serves. ANOVA indicated there was no significant difference between any of the groups tested.

WESTERN KENTUCKY UNIVERSITY (SHIRLEY A. LANEY)
BOWLING GREEN, KENTUCKY

615. JOHNSON, Wenda D. Effects of different levels of knowledge of results on motor skill acquisition. M.A. in Education (Physical Education), 1975. 34 p. (S. Laney)

Students enrolled in 2 beginning bowling classes (N=47) received the same basic instruction on bowling techniques, but practiced under 2 different levels of precision of KR. The exp. group practiced by rolling a full set of 10 bowling pins with each ball (precise KR). The control group practiced by shadow bowling (general KR). The criterion measure was the total no. of pins knocked down with 20 balls rolled by each S. A 1-way ANOVA with repeated measure was used for data analysis. There were no significant differences between groups in effects of the 2 practice conditions upon acquisition of skill. There was, however, a significant trials effect across groups. It was concluded that although both levels of precision of KR resulted in skill acquisition, neither condition was superior to the other.

PERIODICALS REVIEWED

*Acta Chirurgica Scandinavica
*Acta Medica Scandinavica
*Acta Morphologica Neerlando-Scandinavica
*Acta Orthopaedica Scandinavica
*Acta Paediatrica Scandinavica
*Acta Physiologia Scandinavica
*American Corrective Therapy Journal
American Family Physician
*American Heart Journal
*American Journal of Anatomy
*American Journal of Cardiology
*American Journal of Clinical Nutrition
*American Journal of Epidemiology
*American Journal of Human Genetics
*American Journal of the Medical Sciences
*American Journal of Medicine
*American Journal of Nursing
*American Journal of Orthopsychiatry
*American Journal of Physical Anthropology
*American Journal of Physical Medicine
*American Journal of Physiology
*American Journal of Psychiatry
American Journal of Psychology
*American Journal of Public Health
American Journal of Tropical Medicine and Hygiene
American Review of Respiratory Diseases
American Sociological Review
Anatomical Record
*Annals of Human Biology
*Annals of Human Genetics
*Annals of Internal Medicine
*Archives of Environmental Health
*Archives of Internal Medicine
*Archives of Physical Medicine and Rehabilitation
Archives of Surgery
Australian Journal of Experimental Biology and Medical Science
*Aviation, Space, and Environmental Medicine
*British Heart Journal
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*British Journal of Nutrition
*British Journal of Preventive and Social Medicine
British Journal of Psychiatry
*British Journal of Psychology
*British Medical Bulletin
*British Medical Journal
Bulletin of the Los Angeles Neurological Society
California Journal of Educational Research
*California Medicine
Canadian Journal of Physiology and Pharmacology
Canadian Journal of Psychology
*Canadian Journal of Public Health
*Child Development
Child Study Journal
*Circulation
*Clinical Science and Molecular Medicine
*Community Mental Health Journal
*Danish Medical Bulletin
*Diabetes
Educational and Psychological Measurements
*Ergonomics

*Periodicals marked with an asterisk have research reports listed in Part II--Bibliography of this issue of Completed Research.

*European Journal of Applied Physiology and Occupational Physiology
FDA Consumer (Papers)
*Federation Proceedings
*Genetic Psychology Monographs
*Geriatrics
*Government Reports Announcements
*Growth
Health Education
*Home Economics Research Journal
*Human Biology
Human Factors
*Indian Journal of Medical Research
*International Journal of the Addictions
*International Journal of Health Education
International Journal of Occupational Health and Safety
International Journal of Social Psychiatry
*International Review of Sport Sociology
*Japanese Journal of Physiology
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*Journal of the American Medical Association
*Journal of Anatomy
*Journal of Applied Physiology
Journal of Applied Psychology
Journal of Biomechanics
Journal of Bone and Joint Surgery
Journal of Chronic Diseases
*Journal of Clinical Investigation
*Journal of Clinical Psychology
*Journal of Comparative and Physiological Psychology
*Journal of Educational Psychology
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*Journal of Health and Social Behavior
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*Journal of Psychology
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Journal of Teacher Education
Journal of Tropical Medicine and Hygiene
Lancet
*Medicine and Science in Sports
*Military Medicine
*Monographs of the Society for Research in Child Development
*Nature
*New England Journal of Medicine
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Nursing Outlook

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*Nutrition Abstracts and Reviews
*Nutrition Reviews
*Parks and Recreation
*Pediatrics
*Perceptual and Motor Skills
*Physical Educator
*Physical Therapy
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*Postgraduate Medicine
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Proceedings of the Nutrition Society
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Psychological Bulletin
*Psychological Review
*Psychology in the Schools
*Psychosomatic Medicine
*Public Health Reports
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Quarterly Review of Biology
Quest
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Research Bulletin of the NEA
*Research Quarterly, AAHPER
*Revue Canadienne de Biologie
*Rheumatology and Rehabilitation
*Royal Society of Health Journal
*Scandinavian Journal of Clinical and Laboratory Investigation
School Health
School Review
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Sociological Review
Sociology and Social Research
Sociometry
Southern Medical Journal
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